

Road Web Markup Language (RWML)

Specification Ver.0.80

RWML-WG Draft 2001-10-29

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1. Summary

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1. Summary

1.1 About this specification

1.1.1 Objectives

This document defines a language for road information referred to as RWML (Road Web Markup Language) and describes its usage. This document is a draft and it is published to request comments from interested parties in general. It is subject to changes and it is not recommended to make a fixed software that cannot be modified and to make other standards based on this specification.

1.1.2 Background

This specification was originally proposed by Hokkaido Development Bureau, Civil Engineering Research Institute. The working group is a joint research institute and consists of representatives from a number of enterprises and organizations. The working group was organized to define Road Web Markup Language, RWML for describing road information by using XML. This specification is the result of the discussion in the working group since June 1998.

Each member in the working group submitted a proposal for the responsible part in this specification. Those proposals were assembled and have been discussed. But please note that all issues have not discussed thoroughly nor all items has yet agreed unanimously as of October 20, 1999.

After we created RWML 0.71 version on Oct. 20th 1999, RWML specification working group dissolved once, however, we reached the agreement to review it again at the public collaboration "study on utilizing technology of In-transit Advanced Information Communication Society Retail Distribution Information" started in February 2001. In this study, this RWML is reviewed practically through some experiments and added and modified where necessary.

1.1.3 Status of this specification

The version of this specification is 0.80 as of October 29, 2001.

In this updated specification 0.80, necessary additions and modifications were made in order to use this study for Niseko-Yotei-e highway experiment. Parts not used for this experiment are not reviewed. We will review as needed in the future. Therefore there is a great possibility for this 0.80 specification itself to be altered significantly.

If any technology and any specification that may affect this specification come out as a result of other standardization work regarding road information description, we will consider making the adjustments in this specification. And we are also willing to suggest standardization of this specification as open technology.

1.1.4 Contributors

This specification was created on the basis of RWML 0.71a centrally by experiments of an XML technological study working group public collaboration, "Study on Utilizing Technology of In-Transit Advanced Information Communication Society Retailing Information" . The experiment took place in the summer.

Summer time experiment XML technological study working group

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Our appreciation extends to the many other commission members and assistants who contributed to the completion of this project.

In addition, we would like to acknowledge the many people who worked for RWML 0.7 specification as well as 0.70 specification working group members.

1.1.5 Copyright notice

Copyright of this specification and the DTD are held by the RWML working group represented by Yasuhiko Kajiya who belongs to Hokkaido Civil Engineering Institute.

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1.2 Summary of RWML

1.2.1 Purpose

RWML was created as a language for describing road information on the Web and it adopts the XML technology. XML has recently drawn keen attention in electric commerce, digital broadcasting, and other fields.

XML (eXtensible Markup Language) is a meta-language which provides a generalized method to define a "data-set" so that it can be interpreted by machine(machine-readable). XML employs the method to describe the data from HTML which is a language for describing web pages and provides a generalized way to extend it. Data content is enclosed by (start-tag) and (end-tag) so that users can understand the semantics and usage of the data. W3C (World Wide Web Consortium) which is an international consortium for Web standards published XML 1.0 as a recommendation on February in 1998. RWML is based on XML 1.0

The emergence of XML technology enables any data to be distributed among web-site systems on the platform such as Internet/Intranet. XML has drawn attention in electric commerce and digital broadcasting field because XML is recognized as a basic technology of information distribution in a highly information-oriented and data communication-oriented society. RWML was created to distribute road information on such platform. RWML can make value-added information for users by combining road information with other information such as weather information (weather forecast etc.) and local events information.

1.2.2 Summary

Road-related information defined by RWML consists of road information, weather information, disaster prevention information, and regional information. Each information includes common basic information that describes data about administrators etc.

(1) Road Information

Information about road management. It consists of road weather, road surface information, camera image, congestion information, regulation information, traffic flow information, travel time information, and specific place information.

(2) Weather Information

Information about weather. It consists of present weather information, weather forecast information, and warning information.

(3) Disaster Prevention Information

Information about disaster, disaster prevention and restoration. It consists of earthquake information, volcano information, and flood information. However, this version of specification defines only earthquake information.

(4) Regional Information

Information for sightseeing such as events or amusements held at road stations or along the road.

• Basic Information

Information commonly used in each information of RWML. It consists of place information, update information, administrative information, and supply condition.

<RWML>

Road Information <road-info>

Basic Information <basic-info>

Road Weather <road-weather>

Road Surface Information <road-surface>

Camera Image <camera-image>

Congestion Information <congestion>

Regulation Information <regulation>

Traffic Flow Information <traffic-flow>

Travel Time Information <travel-time>

Specific Place Information <specific-place>

Weather Information <weather-info>

Basic Information <basic-info>

Weather Actual Information <actual>

Weather Forecast Information <forecast>

Warning Information <warnings>

Disaster Prevention Information <disaster-inf>

Earthquake <earthquake>

1.2.3 Route Factor

The factor name of the route factor will be "RWML".

The attribute version number is recorded as ("0.80 or 0.8")

Example:

```
<RWML version="0.80">
```

```
</RWML>
```

1.3 Language

(1) RWML (Road Web Markup Language)

Abbreviation of this specification (Road Web Markup Language). A language for describing road information on the Web

(2) XML (eXtensible Markup Language)

Abbreviation of extensible markup language. It has been published by W3C.

(3) URL

Abbreviation of uniform resource locator. Method to specify a location of data on the Web. Its notation is based on RFC1738, RFC1808.

(4) UTC

Abbreviation of Coordinated Universal Time. Time system maintained by BIPM (Bureau International des Poids et Mesures). Basis of the standard frequency and the standard frequency broadcast of time signal.

1.4 References

The following standards are quoted or referred in this specification.

XML

- "eXtensible Markup Language (XML) 1.0" W3C Recommendation, REC-xml-19980210

Notation of place

- JIS X 0401 : To-do-fu-ken (prefecture) identification code
- JIS X 0402 : Identification code for cities, towns and villages
- JIS X 0304 : Codes for the representation of names of countries
- JIS X 0410 1976 : Grid square code

Notation of time

- JIS X 5603-30 : Generalized time
- JIS X 0301 : Representation of dates and times (=ISO 8601:1988)
- W3C-NOTE-datetime Date and Time Formats, Misha Wolf, Charles Wicksteed, Sept.1997

Notation of organization

- JIS X 0802 : Description of name of corporate bodies for information interchange

Notation of hyper-reference

- RFC2368 The mailto URL scheme, P. Hoffman, L. Masinster, J. Zawinski, July 1998
- RFC2396 Uniform Resource Identifiers (URI), T. Berners-Lee, R. Fielding, L. Mansister, Aug. 1998
- INTERNET-DRAFT URLs for Telephone Calls <draft-antti-telephony-url-08.txt>, A. Vaha-Sipila, May 1999

Weather information

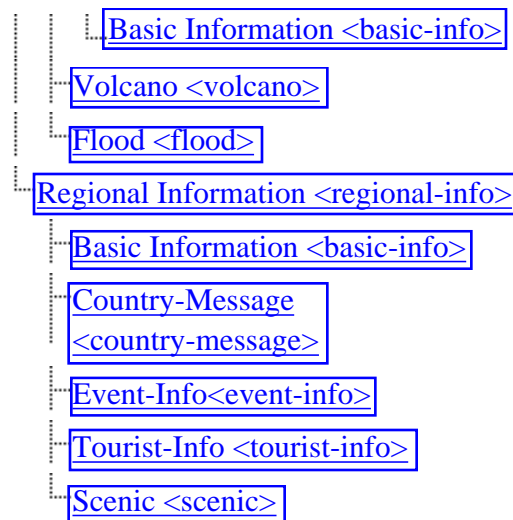


Figure 1.1: RWML tree structure

- Specification of the international weather report method defined by WMO and the ground weather observation method defined by Japan Meteorological Agency
- Prefectural weather forecast implementation guide, local weather distribution forecast implementation guide, and regional time series forecast implementation guide defined by Japan Meteorological Agency
- Specification of warning defined by Japan Meteorological Agency ([Weather Forecast Implementation Guide])

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2. Notation and use of general items

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2. Notation and use of general items

This chapter defines notation and use of general items such as place, time, organization, person, and contact point.

2.1 Place

Information about place consists of point (point), line (route), surface (area), or combination of them.

2.1.1 Point

A point is represented by its latitude, longitude, altitude, and point name. Altitude and point name is omissible. If a place has its own particular name and it is proper to use the name, the point name can be used. Basically, land-surveying system about latitude, longitude, and altitude is based on the International Terrestrial Reference Frame system (ITRF system). Other coordinates systems may be used as well.

2.1.1.1 Latitude and Longitude

Latitude and longitude are represented by its degree or degree/minute/second. If it is represented by degree, the value is signed degrees and the maximum precision is 10^{-6} degrees. If it is represented by degree/minute/second, it is signed degrees/minutes/seconds and the maximum precision is three decimal place of second.

If latitude is represented by degrees, the equator is 0, the North Pole is +90.000000 and the South Pole is -90.000000. If it is represented by degrees/minute/second, the equator is 0, the North Pole is +90,00,00.000 and the South Pole is -90,00,00.000.

If longitude is represented by degrees, the Greenwich meridian is 0, 180 degrees of east longitude is +180.000000, 180 degrees of west longitude is -180.000000. If it is represented by degrees/minute/second, the Greenwich meridian is 0, 180 degrees of east longitude is +180,00,00.000, 180 degrees of west longitude is -180,00,00.000.

In either case, + sign is omissible.

Example: -41.500000 (by degrees)
141,30,00.0 (by degrees/minutes/seconds)

2.1.1.2 Altitude

If the value of the altitude is higher than the datum point of the land-surveying system, it is + signed value in meter is used. If it is lower, - signed value in meter is used. + sign is omissible. The maximum precision is 10^{-2} m.

Example: 15.3 (15.3m)

2.1.1.3 Point name

Point name is described by characters. If a point has several names, formal name (formal), alias (alias), or popular name (popular) can be specified as attributes to describe it.

2.1.2 Route

A route as the target of the information is described. It is described by its route name (or road name), road class, and toll class which indicates whether it is toll road or free. Road class and toll class is omissible. A position or a section on the route can be represented by kilo post or the point name. A section may be represented by the section name assigned to it. If these are omitted, it is interpreted as the whole route.

2.1.2.1 Route name

Route name is described by characters. The formal name is the route name (in case of expressway) or the name of the road (in case of other public roads). In case of overlapped section, the route name with the smaller number is used. If a route has several paths (with bypass etc.), they are distinguished by specifying "main-road/sub-road". If a route has several names (popular name etc.), a formal name (formal), the alias (alias), and the popular name (popular) can be described as attributes to describe them.

Example:

Formal name: Hokkaido Longitudinal Expressway
National route 1 (Fujieda bypass)

Alias: Hokkaido Expressway
Fujieda bypass

2.1.2.2 Road class

Road class is described by characters. It is classified as expressway, motorway, national highway, prefectural road, municipal road, and other road (agricultural road, forest road, private road).

2.1.2.3 Toll class

Whether the road is toll road or free is described by characters. The following five classes are used.

- (1) Toll (charged in the whole section and in the whole time zone)
- (2) Toll by time (charged in a particular time zone)
- (3) Toll by section (charged in a particular section of the road)
- (4) Toll by time and section (charged in a particular time zone and a particular part of the road)
- (5) Free (free in the whole road and in the whole time zone)

2.1.2.4 Route Position

Route position is represented by characters to indicate the point name or kilo post (KP value) on the route. If KP value is used, the unit "KP" is specified. An identifier for a KP value may be added by the road administrator.

If a particular section on the route is specified, the point name and the KP value on the route are specified by using slash "/" between them. In this case, the direction is from the left part to right part. A name assigned to a particular section can be also used.

Example: 15.0KP (15.0 kilo post point)
5.7KP/Otaru IC (from 5.7 kilo post point to Otaru IC)
Suzuran street (the whole section of Suzuran street)

2.1.3 Area

An area as the target of the information is described. It is represented by area name, and prefecture code or municipal code. Country name can be specified.

An area can be specified by mesh notation. This document defines the representation using the mesh code based on a standard (area mesh code of JIS, as of now). In other cases, the definition information to identify the mesh must be described.

2.1.3.1 Country

Country code of two letters based on JIS X 0304 (Country Code) is used to specify a country name.

Example: JP (JAPAN)

2.1.3.2 Region code

5 digits of prefecture code (2 digits) and following municipal code (3 digits) which are defined in JIS as region code are used to identify prefecture and municipality.

Example:

Region Code: 01 (Hokkaido)
01105 (TOYOHIRA-ku, SAPPORO, HOKKAIDO)

2.1.3.3 Area name

Area name is described by characters. If a point has several names such as a popular name adding to its formal name, a formal name (formal), an alias (alias) and a popular name (popular) can be specified as attributes to describe them.

2.1.3.4 Mesh code

The standard name attribute (std) must be specified for a mesh code. As of now, the value is "JIS-X0410-1976". Supplementary information (area name etc.) can be described as an attribute "comment" by using characters for its value.

If a non-standard mesh code is used, the reference point and the length of either side of the lattice (latitude direction and longitude direction) must be defined.

Example: mesh code: 6441
Standard name: JIS-X0410-1976
Comment: Suburb of SAPPORO

2.2 Time and period

Information about time and period is represented by characters which indicate date and time.

2.2.1 Date and time

It is described by calendar date and time difference between UTC time and local time.

(1) year/month/date

Format: CCYY-MM-DD

Example: 1998-08-21

(2) year/month/date, time/minute/second, and the fraction of a second

Format: CCYY-MM-DDThh:mm:ss.n(+ or -)hhmm

Example: 1998-08-21T16:20:30.45+09:00

2.2.2 Extension for ten days and approximate time

Notation for the first ten days, the middle ten days and the last ten days of a month, and approximately XX-th day and approximately XX o'clock are defined.

[J] is the symbol which indicates either first, middle or last ten days in a month. [J] is specified by one of "F", "M", and "L". "F" means the first ten days, "M" means the middle ten days, "L" means the last ten days. "A" preceding date and time indicates that the date and time is approximate.

(1) Specification of ten days in the year/month pattern.

Format: CCYY-MM-J

Example: 1998-08-F (the first ten days of August, 1998)

(2) Specification of approximate date in the year/month/date pattern.

Format: CCYY-MM-ADD

Example: 1998-08-A15 (approximately 15 August, 1998)

(3) Specification approximate time in the year/month/date and time/minute pattern.

Format: CCYY-MM-DDTAhh:mm(+ or -)hhmm

Example: 1998-08-21TA16:30+09:00 (approximately 16:30, 21 August, 1998)

2.2.3 Extension for the week of the month

Notation for the specification of the week of the month is defined here. For example, "the second Saturday every month", "the last Sunday of August" and so on.

"N" indicates that it is the specification of the week of the month. [n] indicates n-th week, [w] indicates w-th day of the week. [n] is the number of "0"- "5" or the indication symbol "L". If it is [0], it means every w-th day of the week. "L" indicates the last w-th day of the month. [w] is the number of "1"- "7", Monday is "1", the following days of the week are numbered incrementally, and Sunday is "7".

When the month specification [MM] is "00", it means every month. When the year specification [CCYY] is "0000", it means every year.

(1) W-th day of the n-th week

Format: CCYY-MM-Nnw

Example: 1998-08-N26 (the second Saturday in August, 1998)

(2) The last w-th day of the month

Format: CCYY-MM-NLw

Example: 1998-12-NL1 (the last Monday in December, 1998)

(3) Every n-th day

Format: CCYY-MM-N0w

Example: 1999-02-N03 (every Wednesday in February, 1999)

(4) Every month

Format: CCYY-00-DD

Example: 1999-00-01 (the 1st day of every month in 1999)

Format: CCYY-00-Nnw

Example: 1999-00-N17 (the first Sunday of every month in 1999)

(5) Every year

Format: 0000-MM-DD

Example: 0000-05-25 (25 May every year)

2.2.4 Time length and period

The followings are the time expressions with length.

(1) Time length and cycle

Duration is specified.

Format: PnYnMnDTnHnMnS

Example: P2D (2 days or every other day)

(2) Period

The starting point and the end point are specified.

Format: CCYYMMDDThhmmss/CCYYMMDDThhmmss

Example: --12-01/--12-25 (from 1 December to 25 December)

(3) Time limit

The date and time of the last point are specified.

Format: ---/CCYYMMDDThhmmss

Example: ---/1999-12-31 (until 31 December 1999)

2.2.5 Simplified notation

The upper part and the lower part of the time notation are omissible as far as it is in conformity with the standard used. In either case, it uses hyphens "-" which indicates the omitted numbers or symbols as is specified.

(1) Specific month/day

Format: --MM-DD

Example: --02-12 (12 February in some year)

(2) Specific day

Format: ---DD

Example: ---12 (12 in some month in some year)

(3) Specific month

Format: --MM

Example: --02 (February in some year)

(4) Specific month/week

Format: --MM-Nnw

Example: --02-N17 (the first Sunday in February in some year)

(5) Specific time

Format: Thh

Example: T07 (7 o'clock of some day)

(6) Specific time/minute

Format: Thh:mm

Example: TA07:30 (approximately 7:30 of some day)

2.3 Organization

Organization is represented by characters. The hierarchy of the organization is represented by a sequence of department names. Such names are separated by comma ",", down to the lowest department.

Example: Civil Engineering Research Institute, Hokkaido Development Bureau
Civil Engineering Research Institute, Hokkaido Development Bureau,
Road Department, Disaster Prevention and Snow Eng. (ITS/Win) Section

2.4 Person

A person is described by name, job, title, etc. Either of them is omissible. If the name is omitted, the title must be specified.

2.4.1 Personal name

Personal name is represented by characters. The family name and the first name are specified in this order and separated by space " ". If a person has several names such as a pen name, those names can be described. In this case, the real name is described as the formal name (formal), the stage name, the pen name, and so on are described as the alias (alias), and the nickname is described as a popular name (popular).

Example:

Formal name: Suzuki Ichiro

Alias: Ichiro

2.4.2 Title

Title is represented by characters. If a person has several titles, those titles can be described.

Example: Manager of ITS
Chief of XX Section

2.5 Contact address

How to contact a person or an organization is specified. If there are several contact addresses, those addresses are described.

2.5.1 Zip code

Zip code is described by 7 digits of the combination of 3 digits and 4 digits separated by hyphen "-".

Example: 162-8602

2.5.2 Address

Address is specified by characters describing the place to contact.

Example : 1-3 Hiragishi, Toyohira-ku, Sapporo, Hokkaido

2.5.3 Hyper-reference

Phone number, fax number, e-mail address and web-site address are described by "href" attribute. If necessary, comments such as names can be described.

Phone number and fax number are described by characters. Characters used to describe them are digits, plus sign "+" (only if country number is specified), hyphen "-", left parenthesis "(" and right parenthesis ")".

E-mail address is represented by characters which indicate an e-mail address.

Web-site address is represent by URI with its absolute address specification.

Example: href="tel:012(345)6789"
href="fax:+81-12-345-6789"
href="mailto:xxx.ceri.go.jp"
href="http://www.ceri.go.jp/test/"

2.6 About Japanese Character Set

In RWML the character set fixed by XML 1.0 (Unicode 2.0, ISO 10646-1) is to be used.

However, regarding Japanese language, it was decided not to use graphic characters for Katakana (half size Katakana), and any characters (double byte alphanumeric characters) regulated in JIS X 0201 among numeric characters, Latin characters and special characters regulated in JIS X 0208 without a specific reason.

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Basic Information Structure <basic-info>

Place <place>

Point <point>

Latitude <latitude>

Longitude <longitude>

Altitude <altitude>

Point Name <point-name>

Address <address>

Access<access>

Access-Note <access-note>

Access Map <access-map>

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3. Basic Information Structure

3.1 Place

Description:

This section describes the information target location. Information pertaining to place consists of either point, route, area, or a combination of these elements depending on the nature of the provided information.

Explanation:

Refer to the notation rules in [2.1 Place](#) unless specific explanations are given.

3.1.1 Point

3.1.1.1 Latitude

Notation Format:

<latitude>*Latitude*</latitude>

Example:

<latitude>41.500000</latitude>
 or
 <latitude>41,30,00</latitude>

3.1.1.2 Longitude

Notation Format:

Figure 3.1: Basic Information Tree Structure

`<longitude>Longitude</longitude>`

Example:

`<longitude>142.250000</longitude>`

or

`<longitude>142,15,00</longitude>`

3.1.1.3 Altitude

Notation Format:

`<altitude>Altitude</altitude>`

Example:

`<altitude>15.3</altitude>`

3.1.1.4 Point Name

Notation Format:

`<point-name>Point Name</point-name>`

Explanation:

The following type names are specified in attribute name-type if required.

formal

alias

popular

Example:

`<point-name>Nakayama Toge</point-name>`

3.1.1.5 Address

Notation Format:

`<address>Address</address>`

Explanation:

The address is recorded.

Example:

`<address>State/Province, City, Town, Street Number</address>`

3.1.1.6 Access

3.1.1.6.1 Access-Note

Notation Format:

`<access-note>Explanation</access-note>`

Explanation:

Directions to the points are described in the characters.

Example:

```
<access-note>National Road XX, heading towards YY, in front of XX traffic light on
the right side</access-note>
```

3.1.1.6.2 Access Map

Notation Format:

```
<access-map src="URL">Image Title</access-map>
```

or,

```
<access-map src="URL" />
```

Explanation:

The brief map image URL which describes how to access the point is shown.

The image headings are described in characters in the element content.

The image URL is described in Attribute src.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Specify the image URL.

Example:

```
<access-map src="map.png">Access Map</access-map>
```

or,

```
<access-map src="http://www.server.domain/directory/map.png" />
```

3.1.2 Route

3.1.2.1 Route Name

Notation Format:

```
<route-name>Route Name</route-name>
```

Explanation:

The following type names are specified in attribute name-type if required.

formal

alias

popular

Example:

```
<route-name name-type="formal">Hokkaido Longitudinal Expressway</route-name>
```

```
<route-name name-type="alias">Hokkaido Expressway</route-name>
```

or,

```
<route-name>National route 1 Main Road</route-name>
```

3.1.2.2 Road Class

Notation Format:

```
<road-class>Road Class</road-class>
```

Example:

```
<road-class>Expressway</road-class>
```

3.1.2.3 Toll

Notation Format:

```
<toll>Toll Class</toll>
```

Example:

```
<toll>Interval Toll</toll>
```

3.1.2.4 Route Position

Notation Format:

```
<route-position>Route Position</route-position>
```

Example:

```
<route-position>15.0KP</route-position>
<route-position>N5.7KP/Otaru IC</route-position>
<route-position>Suzuran Odori</route-position>
```

3.1.3 Area

3.1.3.1 Area Name

Notation Format:

```
<area-name>Area Name</area-name>
```

Explanation:

The following type names are specified in attribute name-type if required.

```
formal
alias
popular
```

Example:

```
<area-name>Tama, Tokyo</area-name>
or
<area-name name-type="popular">Tama New Town</area-name>
```

3.1.3.2 Region Code

Notation Format:

```
<region-code>Region Code</region-code>
```

Example:

```
<region-code>01</region-code>
<!-- Hokkaido -->
or
<region-code>01105</region-code>
<!-- Toyohira-ku Sapporo, Hokkaido -->
```

3.1.3.3 Mesh Code

Notation Format:

```
<mesh-code>Mesh Code</mesh-code>
```

Example:

```
<mesh-code std="JIS-X0140-1976" comment="suburb of Sapporo">6441</mesh-code>
```

3.2 Update

Description:

This section gives the update time and date, update plan, and update period. Update period is omissible.

Explanation:

Refer to the notation rules in [2.2 Time and Period](#) unless specific explanations are given.

3.2.1 Last Update

Description:

This section gives the date and time on which the presented information was created.

Notation Format:

```
<last-update>Last Update </last-update>
```

Example:

```
<last-update>1999-04-01T16:30+09:00</last-update>
```

```
<last-update>1999-11-21</last-update>
```

3.2.2 Next Update

Description:

This section gives the planed date and time for the next information update.

Notation Format:

```
<next-update>Next Update</next-update>
```

Example:

```
<next-update>1999-04-01T17:00+09:00</next-update>
```

```
<next-update>1999-11-28</next-update>
```

3.2.3 Update Period

Description:

This section describes the period for information updating and the cycle that will be updated within that period.

3.2.3.1 Start Time

Description:

This section gives the date and time on which information provision commences.

Notation Format:

```
<start-time>Start Time </start-time>
```

Example:

```
<start-time>1999-04-01T08:00+09:00</start-time>
```

3.2.3.2 End Time

Description:

This section gives the date and time on which information provision concludes.

Notation Format:

```
<end-time>End Time</end-time>
```

Example:

```
<end-time>1999-04-01T08:00+09:00</end-time>
```

3.2.3.3 Period

Description:

This section describes the period in which the provided information is updated.

Update period is described.

Notation Format:

```
<period>Period</period>
```

Example:

```
<period>PT30M</period>
<!-- Update /30minutes -->
```

3.3 Authority

Description:

The authority section gives information related to the organization or the individual who manages the information. If several organization names and personal names are required as authority information, list these elements. In the case that there are any restrictions on notation, list the name of the final responsible person in charge of providing information.

Explanation:

Refer to the notation rules in [2. Notation and Use of General Items](#) unless specific explanations are given.

3.3.1 Authority Name

Description:

This section gives the organization name or department name to which the information providing organization or individual belongs.

3.3.1.1 Country

Description:

This section indicates the country to which an information providing organization or individual belongs. Notation format follows the notation format in [2.1.3.1 Country Name](#).

Notation Format:

<country>*Country*</country>

Example:

<country>JP</country>

<-- JAPAN -->

3.3.1.2 Organization

Description:

This section gives the organization to which an information providing organization or individual belongs is described. Refer to the notation rules in [2.3 Organization](#).

Notation Format:

<organization>*Organization* </organization>

Example:

<organization>Hokkaido Development Bureau, Civil Engineering Research Institute</organization>

3.3.1.3 Section

Description:

This section indicates the organization to which an information provider belongs.

Notation Format:

<section>*Section Name*</section>

Example:

<section>Hokkaido Development Bureau, Civil Engineering Research Institute, Road Division, Disaster Prevention and Snow Engineering Section</section>

3.3.1.4 Title

Description:

This section gives the title of the information provider. Refer to the notation rules in [2.4.2 Title](#).

Notation Format:

<title>*Title*</title>

Example:

<title>ITS Administer </title>

3.3.1.5 Administrator Name

Description:

This section gives the name of the administrator who provides the information. Refer to the notation rules in [2.4.1 Personal Name](#).

Notation Format:

<administrator-name>*Administrator Name*</administrator-name>

Explanation:

Designate the following class names for attribute name-type. If no designation is required, it is acceptable not to provide a designation.

formal
alias
popular

Example:

```
<administrator-name>Taro Hokkai</administrator-name>
```

3.3.2 Liaison

Description:

This section gives the method for contacting the information provider in the liaison entry. In the case that there are several liaisons, describe them. At least one liaison or contact method must be listed.

3.3.2.1 Contact Name

Description:

Give a contact name specific to the liaison.

Notation Format:

```
<contact-name>Contact Name</contact-name>
```

Explanation:

Input the liaison name using characters.

Example:

```
<contact-name>Michinoeki Liaison Council</contact-name>
```

3.3.2.2 Zip Code

Description:

This section gives the zip code of the liaison. Refer to the notation rules in [2.5.1 Zip code](#).

Notation Format:

```
<zip-code>Zip Code</zip-code>
```

Example:

```
<zip-code>162-8602</zip-code>
```

3.3.2.3 Address

Description:

Give the liaison's address. Refer to the notation style in [2.5.2 Address](#).

Notation Format:

```
<address>Address</address>
```

Example:

```
<address>
1 jo, 3 chome, Hiragishi Toyohira-ku Sapporo, Hokkaido</address>
```

3.3.2.4 Contact Method

Description:

This section describes the method for contacting the liaison. Refer to the notation rules in [2.5.3 Hyper-reference](#).

Notation Format:

```
<contact-method>Comment</contact-method>
```

Example:

```
<contact-method href="tel:012(345)6789">Main Number</contact-method>
<contact-method href="fax:+81-12-345-6789"/>
<contact-method href="mailto:xxx.ceri.go.jp">For test use</contact-method>
<contact-method href="http://www.ceri.go.jp/test/">Test site</contact-method>
```

3.4 Condition

Description:

This section lists any limits given by the information provider on presenting the information.

3.4.1 Condition Type

Description:

This section describes the type of information to be given.

Notation Format:

```
<condition-type>Condition Type</condition-type>
```

Explanation:

For condition type, record one term from the list of defined terms below.

```
test    available for test use only
free    available for free
pay     not available for free. Note the information service fee in the "notes"
section.
other   Give details in the "notes" section.
```

Example:

```
<condition-type>free</condition-type>
```

3.4.2 Permission

Description:

This section gives the permission status on the provided information.

Notation Format:

```
<permission>Permission</permission>
```

Explanation:

For permission status, record one term from the list of defined terms below.

none	Not required.
notice	Notice required. Describe the notice method in the "notes" section.
contract	Contract required. Describe the contract drafting method in the "notes" section.
other	Describe the details in the "notes" section.

Example:

```
<permission>none</permission>
```

3.4.3 Limitation

Description:

This section gives the liability exemption limitations on the provided information.

Notation Format:

```
<limitation>Limitation</limitation>
```

Explanation:

For liability exemption limitations, record one term from the list of defined terms below.

exempt	Information provider is not responsible for damage incurred from the use of the data.
other	Describe the details in the "notes" section.

Example:

```
<limitation>escape</limitation>
```

3.4.4 Note

Description:

This section gives notes on the condition of providing information.

Notation Format:

```
<note>Note</note>
```

Explanation:

Express the limitations in free style characters or by designating the file's URL.

Format the content like the designated items in [3.4.1 Condition Type](#), [3.4.2 Permission](#), [3.4.3 Limitation](#).

Example:

```
<note>report usage permission to the e-mail address before the event </note>
<note>http://www.ceri.go.jp/its-win/note001/</note>
```

Road Web Markup Language (RWML)

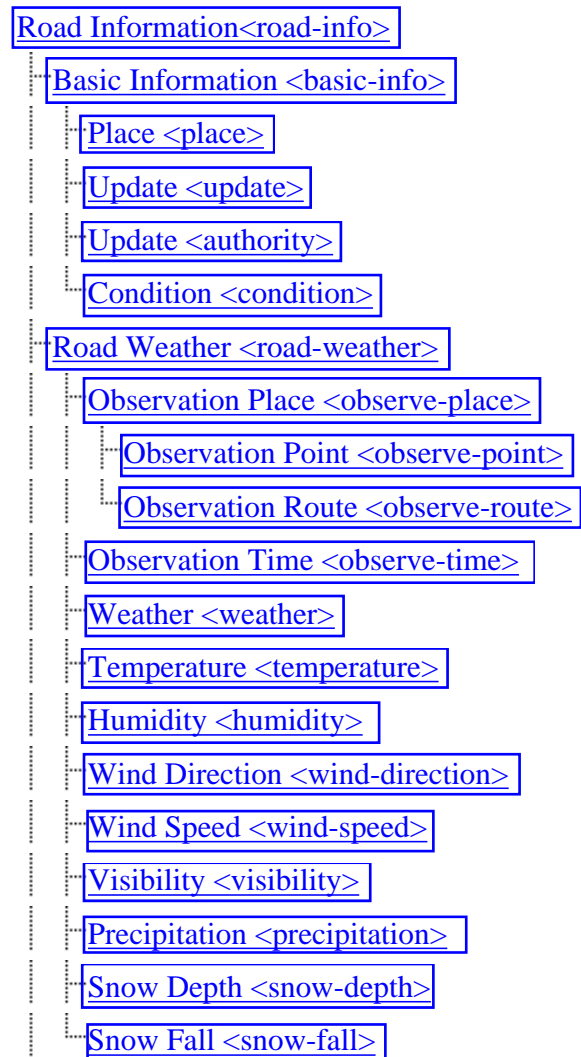
Specification Ver.0.80

RWML-WG Draft 2001-10-29

4. Road Information

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4 Road Information

4.1 Basic Information

Description:

This section contains basic information regarding roads.

Explanation:

This section lists the elements that make up basic information. Base individual elements on [3. Basic Information Structure](#).

4.2 Road Weather

Description:

This section contains information related to road weather.

4.2.1 Observation Place

Description:

This section contains information for road weather in observed locations.

4.2.1.1 Observation Point

Description:

This section contains information for observed points.

Notation Format:

```
<observe-point>
  <latitude>Latitude</latitude>
  <longitude>Longitude</longitude>
  <altitude>Altitude</altitude>
  <point-name>Point Name</point-name>
  <observe-code system="code system">Observation Code</observe-code>
</observe-point>
```

Explanation:

When an observation code is attached to a code for a given system, the code designates that system.

All other cases follow the notation rules in [3.1.1 Point](#).

Example:

```
<observe-point>
  <latitude>41,500000</latitude>
  <longitude>142,250000</longitude>
  <altitude>15.3</altitude>
  <point-name>Nakayama Toge</point-name>
  <observe-code system="weather">9999</observe-code>
</observe-point>
```

4.2.1.2 Observation Route

Description:

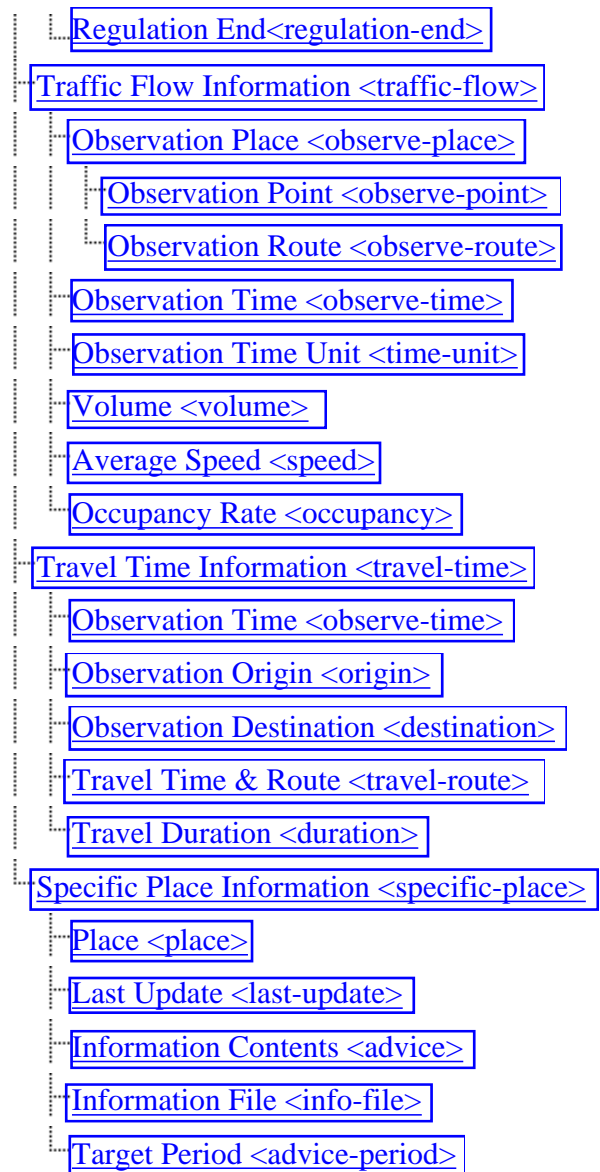


Figure 4.1: Road Information Tree Structure

This section gives information for observed routes.

Notation Format:

```
<observe-route>
  <route-name>Route Name</route-name>
  <road-class>Road Class</road-class>
  <toll>Toll</toll>
  <route-position>Route Position</route-position>
  <observe-code system="observation system">Observation Code</observe-code>
</observe-route>
```

Explanation:

Refer to the notation rules in [4.2.1.1](#) for Observation Code and [3.1.2 Route](#) for other items.

Example:

```
<observe-route>
  <route-name>Sasson Expressway</route-name>
  <route-position>Otaru IC</route-position>
  <observe-code system="WEATHER">A999</observe-code>
</observe-route>
```

4.2.2 Observation Time

Description:

This section gives the date and time of observation.

Explanation:

Refer to the date and time notation rules in [2.2.1 Date and Time](#).

Notation Format:

```
<observe-time>Observation Date and Time</observe-time>
```

Example:

```
<observe-time>1999-04-01T16:30+09:00</observe-time>
```

4.2.3 Weather

Description:

This section contains the weather status.

Notation Format:

```
<weather type="Pattern">Weather</weather>
```

Explanation:

Numeric codes and characters are listed below. If there is no designation for attribute type, notate by characters only.

Code	Characters
1	Clear
2	Fine
3	Slightly Cloudy
4	Cloudy
5	Hazy
6	Dust Storm

7	Drifting Snow
8	Fog
9	Drizzle
10	Rain
11	Sleet
12	Snow
13	Graupel
14	Hail
15	Lightning

Attributes:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
type	code, text	text	Input numeric code or characters.

Example:

```
<weather type="text">Excellent Conditions</weather>
```

4.2.4 Temperature

Description:

This section contains atmospheric temperature information.

Notation Format:

```
<temperature>Temperature </temperature>
```

Explanation:

Temperature is expressed in Celsius. Notations extend out to the first decimal place. When the temperature is below zero degrees Celsius, a [-] minus mark is placed before the number representing the temperature. The decimal value can be omitted.

If no data can be obtained due to obstacles, "nodata" is recorded.

Example:

```
<temperature>-2.1</temperature>
```

4.2.5 Humidity

Description:

This section gives the relative atmospheric humidity.

Notation Format:

```
<humidity>Humidity</humidity>
```

Explanation:

Humidity is measured in terms of "relative humidity". It is expressed in percentage. The decimal value is omitted.

If no data can be obtained due to obstacles, "nodata" is recorded.

Example:

```
<humidity>70</humidity>
```

4.2.6 Wind Direction

Description:

This section notes which direction the wind is blowing from.

Notation Format:

`<wind-direction code="code">Enter Wind Direction Here</wind-direction>`

Explanation:

Notation for wind direction is given below in numeric code and alphabetic code. With true north serving as a standard, wind direction is expressed by dividing a circle clockwise into 16 sections. Use the attribute code to specify whether alphabetic code notation or numeric code notation is used. If there is nothing written in the attribute code, it is understood that alphabetic code is being used to designate wind direction.

When the wind speed is under 0.2 m/s, this is regarded as no wind and "calm" can be entered. The numeric code "00" and the alphabetic code "C" is used for "calm".

Direction	Numeric Code	Alphabetic Code
North	16	N
North North East	01	NNE
North East	02	NE
East North East	03	ENE
East	04	E
East South East	05	ESE
South East	06	SE
South South East	07	SSE
South	08	S
South South West	09	SSW
South West	10	SW
West South West	11	WSW
West	12	W
West North West	13	WNW
North West	14	NW
North North West	15	NNW
Calm	00	C

If no data can be obtained due to obstacles, "nodata" is recorded.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
code	num, alpha	alpha	Specify whether a numeric code or alphabetic code.

Example:

`<wind-direction>NNE</wind-direction>`

or,

`<wind-direction code="num">01</wind-direction>`

4.2.7 Wind Speed

Description:

This section gives the distance that air moves in unit of time.

Notation Format:

```
<wind-speed>Wind Speed</wind-speed>
```

Explanation:

Wind speed is expressed in m/s. The wind speed value is recorded up to 1/10 m/s.

If no data can be obtained due to obstacles, "nodata" is recorded.

Example:

```
<wind-speed>3.6</wind-speed>
```

4.2.8 Visibility**Description:**

This section gives the visibility distance (the farthest distance that can be measured by eyesight).

Notation Format:

```
<visibility>Visibility</visibility>
```

Explanation:

Visibility is expressed in the unit "m". Visibility can extend up to 100 m under good conditions. When visibility exceeds 1000 m, "excellent" can be recorded.

In the case that, due to obstacles, observation data can not be obtained, specify this by recording "nodata".

Example:

```
<visibility>500</visibility>
```

4.2.9 Precipitation**Description:**

This section gives the amount of precipitation that reached the earth surface in unit of time.

Notation Format:

```
<precipitation span="Unit of Time">Precipitation Amount</precipitation>
```

Explanation:

Precipitation is expressed in the unit "mm". Precipitation value is recorded up to 1/10 mm.

In the case that, due to obstacles, observation data can not be obtained, specify this by recording "nodata".

In this case, clearly indicate time by using attribute span as the unit of time.

(1) 1 hour previous precipitation amount (hourly)

Indicate the amount of precipitation for a period of 1 hour starting 1 hour before time observed.

(2) 3 hours previous precipitation amount (pre03h)

Indicate the amount of precipitation for a period of 3 hours starting 3 hours before time observed.

(3) 6 hours previous precipitation amount (pre06h)

Indicate the amount of precipitation for a period of 6 hours starting 6 hours before time observed.

(4) 12 hours previous precipitation amount (pre12h)

Indicate the amount of precipitation for a period of 12 hours starting 12 hours before time observed.

(5) 24 hours previous precipitation amount (pre24h)

Indicate the amount of precipitation for a period of 24 hours starting 24 hours before time observed.

(6) Daily precipitation amount

Indicate the amount of precipitation from 0:00 to 24:00.

When the attribute span is omitted, it is understood that the value recorded is for a period of one hour starting one hour before time observed.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
span	hourly, pre03, pre06, pre12, pre24, daily	hourly	Hourly precipitation amount 3 hours previous precipitation amount 6 hours previous precipitation amount 12 hours previous precipitation amount 24 hours previous precipitation amount Daily precipitation amount

Example:

```
<precipitation>8</precipitation>
```

or,

```
<precipitation span="pre24">25</precipitation>
```

4.2.10 Snow Depth

Description:

This section indicates the depth of fallen snow that naturally piles up and covers the ground.

Notation Format:

```
<snow-depth measure="Observation">Snow Depth</snow-depth>
```

Explanation:

The current snow depth is expressed in units of "cm".

In the case that, due to obstacles, observation data can not be obtained, specify this by recording "nodata".

In the observation process, clarify whether the observation means is visual observation (manual) or snowdepth meter (auto) using the attribute measure. When the choice of method is not clarified, the value is assumed to be from the snowdepth meter (auto).

(1) Visual Observation (manual)

Visual observation is made with a snow scale. Snow not regarded as fallen snow is marked as "non".

(2) Snowdepth Meter Observation (auto)

The results of observation from a fallen snow meter is changed from meters to centimeters. When the meter value is 0 cm, "non" is recorded.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
----------------	-----------------	---------------------	-------------

measure	manual, auto	auto	Indicate visual observation (manual) or snowdepth meter observation (auto).
---------	--------------	------	---

Example:

```
<snow-depth measure="manual">123</snow-depth>
```

4.2.11 Snow Fall

Description:

This section indicates the depth of snow that is piled on the ground within a given amount time.

Notation Format:

```
<snow-fall span="Observation Target Period" measure="Observation">Fallen Snow Depth</snow-fall>
```

Explanation:

For the depth of fallen snow, the amount of snow that falls within the observation target time period is expressed in "cm" units. The measurement target time period must be clarified in the attribute span. As a rule, the attribute span is expressed following the notation style in [2.2.4 Time Length and Period](#). However, for the following specific time periods, it is acceptable to use the attribute values given below (hourly, daily 21, daily 09) to

(1) 1 hour previous precipitation amount (hourly)

Indicate the value for a period of 1 hour starting 1 hour before time observed.

(2) Daily Snowfall Amount: 21:00 (daily 21)

Indicate the value of snowfall from 21:00 on the previous day to 21:00 on the present day.

(3) Daily Snowfall Amount: 09:00 (daily 09)

Indicate the snowfall value from 09:00 on the present day to 09:00 the next day.

When, due to obstacles no data can be obtained, "nodata" is recorded.

In the observation process, clarify whether the observation means is visual observation (manual) or snowdepth meter (auto) using the attribute measure. When the choice of method is not clarified, the value is assumed to be from the snowdepth meter (auto).

(1) Visual Observation (manual)

Visual observation is made with a snow measuring plate. When there is no snowfall, "non" is recorded.

(2) Snowdepth Meter Observation (auto)

When carrying out snowdepth meter observation, the difference between the depth of snow on the ground at the commencement of a clearly defined observation time period and the depth of snow on the ground at the conclusion of a clearly defined observation time period is the "snowfall depth". If there is a negative value for the "snowfall depth", it becomes 0.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
span	CDATA, hourly, daily21, daily09	#REQUIRED	List the commencement time and the conclusion time as seen in 2.2.4 Time Length and Period . Value at 1 hour previous (hourly), Daily Snowfall Amount: 21:00 (daily 21), Daily Snowfall Amount: 09:00 (daily 09)

measure	manual, auto	auto	Indicate visual observation (manual) or snowdepth meter observation (auto).
---------	--------------	------	---

Example:

```
<snow-fall span="daily21" measure="manual">15</snow-fall>
or
<snow-fall span="hourly">3</snow-fall>
or
<snow-fall span="T09/T15" measure="manual">8</snow-fall>
```

4.3 Road Surface Information

Description:

This section gives information relating to the condition of the road surface.

4.3.1 Observation Place

Description:

This section indicates the location of the road surface that is observed.

Explanation:

Follow [4.2.1](#)

4.3.2 Observation Time

Description:

Road Surface Condition

Explanation:

Follow [4.2.2](#)

4.3.3 Road Surface Condition

Description:

This section indicates the road surface slipperiness classification.

Notation Format:

```
<surface type="Pattern">Road Surface Condition</surface>
```

Explanation:

Express using the road surface condition classification code. Use the simple classification system below (7 distinctions).

Regulate the use of code or description corresponding to the attribute type.

Code	Road Condition
1	Very slippery road surface
2	Icy road
3	Compacted Snow
4	Powder snow / Granular snow
5	Slash
6	Wet
7	Dry

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
type	code, text	text	Indicate code or description

Example:

```
<surface>Sherbet</surface>
```

4.3.4 Detailed Road Surface Condition

Description:

This section describes the slipperiness of the road surface in detail.

Notation Format:

```
<surface-detail type="Pattern">Road Surface Condition in Detail</surface-detail>
```

Explanation:

The road surface condition is expressed with the road surface condition classification code. For classification, the road surface classification system from Hokkaido Development Bureau winter period road surface management manual (13 classifications) is used.

Regulate the use of code or characters corresponding to the attribute type.

Code	Road Surface Condition in Detail
11	Very slippery ice film
12	Very slippery ice crust
13	very slippery compacted snow
14	Ice crust
15	Powder snow on ice-plate layer
16	Ice film
17	Granular snow on ice crust
18	Compacted snow
19	Powdey snow
20	Granular snow
21	Sherbet
22	Moist
23	Dry

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
type	code, text	text	Indicate code or characters.

Example:

```
<surface-detail type="code">13</surface-detail>
```

4.3.5 Road Surface Temperature

Description:

This section indicates the temperature of the road surface.

Notation Format:

```
<surface-temperature>Road Temperature</surface-temperature>
```

Explanation:

Road temperature is expressed in celsius and the value is extended to 1/10 of a degree. When the temperature is below 0 degrees, a [-] (minus mark) is attached before the number. In this case, the decimal value can be omitted.

Example:

```
<surface-temperature>-0.2</surface-temperature>
```

4.3.6 Road Surface Salt Density

Description:

This section indicates the salinity content rate of water on the road surface.

Notation Format:

```
<surface-salt>Road Surface Salt Content</surface-salt>
```

Explanation:

Road surface salt density is expressed in percent. Value is extended to 1/10 of a percent.

Example:

```
<surface-salt>9.8</surface-salt>
```

4.4 Camera Image

Description:

This section gives information relating to images gathered from taking pictures of the road.

4.4.1 Observation Place

Description:

This section gives information for the location where the camera images were taken.

Explanation:

Follow [4.2.1](#).

4.4.2 Observation Time & Date

Description:

This section indicates the date and time for which the camera images were taken.

Explanation:

Follow [4.2.2](#).

4.4.3 Image File

Description:

This section indicates camera image file names.

Notation Format:

```
<image-file src="URL">Image Title</image-file>
```

Explanation:

Camera images are given a file name. Follow URL notation for the method of specifying a file name.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Specify an image file location.

Example:

```
<image-file src="www.rwmlserver.ne.jp/images/img99990507.jpg">1999-05-07 Camera Image</image-file>
```

4.4.4 Camera Data

Description:

This section indicates the camera data.

Notation Format:

```
<camera>Camera Data</camera>
```

Explanation:

Camera data is expressed in characters. Abbreviations are permitted. Specify each image file.

Example:

```
<camera>Camera No.0103, Camera Height 7m, 35mm Wide Angle Lens</camera>
```

4.4.5 Image Comment

Description:

This section gives a supplementary explanation for images.

Notation Format:

```
<comment>Image Explanation</comment>
```

Explanation:

Comments regarding camera images are expressed in characters. Each image file is specified.

Example:

```
<comment>Image Taken at Nakayama Toge in the Direction of Sapporo</comment>
```

4.4.6 Image Processing Information

Description:

This section gives information obtained from processing the camera images.

Notation Format:

```
<image-process>Image Processing Information</image-process>
```

Explanation:

Observations which originate from the use of camera and are obtained from camera images are expressed in characters. Each image file is specified.

Example:

```
<image-process>Accident Occurrence </image-process>
```

4.4.7 Equipment Condition

Description:

This section indicates the movability condition of equipment.

Notation Format:

```
<equipment-condition>Equipment Condition</equipment-condition>
```

Explanation:

Equipment movability condition is expressed in characters. No code is used for notation. Each image file is specified.

Example:

```
<equipment-condition>Trouble: File Error</equipment-condition>
```

4.5 Congestion Information

Description:

This section gives information related to congestion.

4.5.1 Observation Place

Description:

This section indicates the target location for congestion.

Explanation:

Follow [4.2.1](#).

4.5.2 Observation Date & Time

Description:

This section indicates the date and time presented for congestion.

Explanation:

Follow [4.2.2](#).

4.5.3 Congestion Status

Description:

This section indicates the status of congestion.

Notation Format:

```
<congestion-status>Congestion Status</congestion-status>
```

Explanation:

The degree of the congestion can be classified into traffic jam, crowding, or natural flow. It is not a requirement to utilize these classifications.

Example:

```
<congestion-status>Congestion</congestion-status>
```

4.5.4 Congestion Top

Description:

This section gives the congestion top location.

Notation Format:

```
<congestion-top>
  <point>
    <latitude>Latitude</latitude>
    <longitude>Longitude</longitude>
    <altitude>Altitude</altitude>
    <point-name>Point Name</point-name>
  </point>
  <route>
    <route-name>Route Name</route-name>
    <route-position>Route Position</route-position>
  </route>
</congestion-top>
```

Explanation:

For point, route name, and route position, refer to the notation style in [3.1 Place](#).

Information that is included in the observation place section can be omitted.

Example:

```
<congestion-top>
  <point>
    <latitude>38,500000</latitude>
    <longitude>137,250000</longitude>
    <altitude>103</altitude>
    <point-name style="poplular">Tunnel #1</point-name>
  </point>
</congestion-top>
```

4.5.5 Congestion Direction

Description:

This section gives information relating to downstream congestion flow or the congestion direction.

Notation Format:

```
<congestion-direction>Congestion Direction</congestion-direction>
```

Explanation:

Congestion direction is expressed in characters.

Example:

```
<congestion-direction>Outer Lane</congestion-direction>
```

4.5.6 Congestion Length

Description:

This section gives the length of the congested area.

Notation Format:

```
<congestion-length>Congestion Length</congestion-length>
```

Explanation:

Congestion length is expressed in km units. Value is extended to 1/10 km.

Example:

```
<congestion-length>3.5</congestion-length>
```

4.5.7 Congestion Outbreak Time

Description:

This section gives the congestion outbreak time.

Notation Format:

```
<outbreak-time>Congestion Outbreak Time</outbreak-time>
```

Explanation:

If the congestion begins due to a time specifiable phenomenon, note the time. Refer to the notation style in [2.2.1 Date and Time](#).

Example:

```
<outbreak-time>1999-10-01T17:15</outbreak-time>
```

4.5.8 Congestion Cause

Description:

This section explains the cause of the congestion.

Notation Format:

```
<congestion-cause>Congestion Cause</congestion-cause>
```

Explanation:

Note the cause of the congestion. If the nature of the congestion necessitates the use of notation that does not coincide with the regulated notation style, it is possible to use characters for notation.

- (1) Natural Congestion
- (2) Traffic Jam
- (3) Congestion caused by sightseeing or inattentive driving
- (4) Congestion caused by accident(s)
- (5) Congestion caused by construction
- (6) Cause Unclear

Example :

```
<congestion-cause>Natural Congestion</congestion-cause>
```

4.6 Regulation Information

Description:

This section gives information relating to regulation.

4.6.1 Regulation Place

Description:

This section describes the regulated target location.

Notation Format:

```

<regulation-place>
  <point>
    <latitude>Latitude</latitude>
    <longitude>Longitude</longitude>
    <altitude>Altitude</altitude>
    <point-name>Point Name</point-name>
  </point>
</regulation-place>
or,
<regulation-place>
  <route>
    <route-name>Route Name</route-name>
    <route-position>Route Position</route-position>
  </route>
</regulation-place>

```

Explanation:

Refer to the notation style in [3.1 Place](#).

Example:

```

<regulation-place>
  <point>
    <latitude>41,500000</latitude>
    <longitude>142,250000</longitude>
    <altitude>15.3</altitude>
    <point-name >Nakayama Touge</point-name>
  </point>
</regulation-place>
or
<regulation-place>
  <route>
    <route-name>Hokkaido Longitudinal Expressway</route-name>
    <route-position>Chitose/ Chitose IC/Eniwa IC</route-postion>
  </route>
</regulation-place>

```

4.6.2 Regulation Time

Description:

This section contains the regulation proposed date and time.

Notation Format:

```
<regulation-time>Regulation Proposed Date & Time</regulation-time>
```

Explanation:

Refer to the notation style in [2.2.1 Date and Time](#).

Example:

```
<regulation-time>1999-04-01T16:30+09:00</regulation-time>
```

4.6.3 Regulation Class

Description:

The regulation class is described.

Notation Format:

```
<regulation-class>Regulation Class</regulation-class>
```

Explanation :

Regulation class is expressed in characters. Some examples of regulations are listed below.

- (1) Traffic Halt
- (2) Left-Right Turning Regulations
- (3) Speed Regulations
- (4) Lane Regulations
- (5) One Way Traffic Regulations
- (6) Tire Chain Regulations
- (7) On-off Ramp Regulations
- (8) Large Size Motor Vehicle Regulations
- (9) Transport Regulations
- (10) Unclear

Example :

```
<regulation-class>Traffic Halt (Winter Traffic Halt)</regulation-class>
```

4.6.4 Regulation Cause

Description:

This section gives the event causing the regulation.

Notation Format:

```
<regulation-cause>Regulation Cause</regulation-cause>
```

Explanation:

Regulation cause is expressed in characters. Some examples of causal events are listed below.

- (1) Accident
- (2) Fire
- (3) Stalled Vehicle
- (4) Debris / Obstacles in the Road
- (5) Construction
- (6) Work
- (7) Event
- (8) Weather
- (9) Disaster
- (10) Earth Quake Warning
- (11) Unclear

Example:

```
<regulation-cause>Accident (Physical Injury)</regulation-cause>
```

4.6.5 Regulation Direction

Description:

This section gives information relating to the direction in which the regulation points or flows.

Notation Format:

<regulation-direction>*Regulation Direction*</regulation-direction>

Explanation:

When the regulation is moving towards a certain direction, note that direction or flow in characters.

Example:

<regulation-direction>Moving Southward</regulation-direction>

or

<regulation-direction>Towards Sapporo Kita Interchange</regulation-direction>

4.6.6 Regulation Start

Description:

This section describes the commencement time or the planned commencement time of the regulation.

Notation Format:

<regulation-start>*Regulation Start*</regulation-start>

Explanation:

For time notation, refer to the notation style in [2.2.1 Date & Time](#).

Example:

<regulation-start>1999-04-01T16:30+09:00</regulation-start>

4.6.7 Regulation End

Description:

This section gives the regulation's planned time of conclusion.

Notation Format:

<regulation-end>*Regulation End*</regulation-end>

Explanation:

If the regulation has a planned conclusion time, note the time. If the conclusion time is unknown or unclear, note "unclear".

For time notation, refer to the notation style in [2.2.1 Date & Time](#).

Example:

<regulation-end>1999-04-01T20:30+09:00</regulation-end>

4.7 Traffic Flow Information

Description:

This section gives information related to the traffic volume.

4.7.1 Traffic Flow Information

Description:

This section describes the location targeted for congestion.

Explanation:

Follow [4.2.1](#).

4.7.2 Observation Time

Description:

This section gives the proposed date and time for traffic volume.

Explanation:

Follow [4.2.2](#).

4.7.3 Observation Time Unit

Description:

This section gives the time unit used during observation of traffic.

Notation Format:

```
<time-unit>Observation Time Unit</time-unit>
```

Explanation:

Use the observation results from the time unit observation period to determine traffic flow, average speed, average distance between vehicles. To appoint time, refer to the notation style used in the section relating to time period in [2.2.4 Time Length and Period](#).

Example:

```
<time-unit>PT20M</time-unit>
```

4.7.4 Traffic Volume

Description:

This section describes the number of vehicles passing through the observation point.

Notation Format:

```
<volume>Traffic Volume</volume>
```

Explanation:

Traffic volume value is expressed in units of one vehicle passing through the observation point in units of time during the observation time. If it is possible to organize vehicles into classes, notation following the classification can be carried out. Here are examples of general classifications.

Example: Compact Vehicle, Large Vehicle, Total, Unclassifiable

Example :

```
<volume>Large:10,Compact:25,Total: 35</volume>
```

4.7.5 Average Speed

Description:

This section describes the average speed of passing vehicles.

Notation Format:

```
<speed>Average Speed</speed>
```

Explanation:

The average speed of vehicles passing through the observation period in time units is expressed in units of 1km/hr.

Example:

```
<speed>40</speed>
```

4.7.6 Occupancy Rate

Description:

This section indicates the occupancy rate, given as a unit of volume expressing the condition of traffic density on the road.

Notation Format:

```
<occupancy>Occupancy Rate</occupancy>
```

Explanation:

The occupancy rate at the observation point is expressed in a percentage.

Example:

```
<occupancy>32</occupancy>
```

4.8 Travel Time Information

Description:

This section gives information relating to travel time measurement.

4.8.1 Observation Time

Description:

This section gives the proposed date and time for travel.

Explanation:

Follow [4.2.2](#).

4.8.2 Observation Origin

Description:

This section gives point information on the origin which provides travel time.

Notation Format:

```
<origin>Commencement Point</origin>
```

Explanation:

The proposed point of commencement for travel time is expressed in a characters .

Example: Tomei Expressway 11KP, near Kitahachi Oji bus stop, Tanihara Crossing

Example:

```
<origin>Hokkaido Expressway Osyamanbe Interchange </origin>
```

```
<origin>Near Muroran Station</origin>
```

4.8.3 Observation Destination

Description:

This section gives point information on the destination which provides travel time.

Notation Format:

```
<destination>Destination</destination>
```

Explanation:

The target position of the travel time measurement is expressed in characters.

Example: Yokohama Interchange, Futaba Service Area Entrance, Itabashi Honcho Crossing

Example:

```
<destination>Hokkaido Expressway Sapporo Nishi Interchange</destination>
```

```
<destination>Kanayama Parking Area Entrance </destination>
```

4.8.4 Travel Time & Route

Description:

This section gives the route which provides the travel time.

Notation Format:

```
<travel-route>Travel Route</travel-route>
```

Explanation:

The target route for the travel time measurement is expressed by listing point information. The list divides point information written in characters by a slash [/], and describes in order of starting point => terminal point.

Example:

```
<travel-route>National Route 38/Makubetsucho Honcho/National Route 242</travel-route>
```

4.8.5 Travel Duration

Description:

This section gives the travel duration.

Notation Format:

```
<duration>Travel Duration</duration>
```

Explanation:

The value for the duration of travel time between the travel duration commencement point and the travel duration target point that takes place on the designated date and time is measured in units of 1 minute. To record duration, Refer to the notation style in [2.2.4 Travel Length and Period](#).

Example:

```
<duration>PT30M</duration>
```

4.9 Specific Place Information

Description:

This section describes the cautions and precautions given to traveler(s).

4.9.1 Place

Description:

This section gives the specific information for the travel target place.

Notation Format:

```
<place>
  <point>
    <latitude>Latitude</latitude>
    <longitude>Longitude</longitude>
    <altitude>Altitude</altitude>
    <point-name>Point Name</point-name>
  </point>
</place>
or,
<place>
  <route>
    <route-name>Route Name</route-name>
    <route-position>Route Position</route-position>
  </route>
</place>
```

Explanation:

Refer to the notation style in [2.1 Place](#).

Example:

```
<place>
  <point>
    <latitude>41,500000</latitude>
    <longitude>142,250000</longitude>
    <altitude>15.3</altitude>
    <point-name>Nakayama Touge</point-name>
  </point>
</place>
or,
<place>
  <route>
    <route-name>Hokkaido Longitudinal Expressway</route-name>
    <route-position>Chitose IC/Eniwa IC</route-postion>
  </route>
</place>
```

4.9.2 Last Update

Description:

This section gives the update time and date for a specific place.

Notation Format:

```
<last-update>Last Update Date & Time</last-update>
```

Explanation:

[3.2.1 Last Update](#).

Example:

```
<last-update>1999-04-01T16:30+09:00</last-update>
```

4.9.3 Information Contents

Description:

This section describes information that should be dispersed.

Notation Format:

```
<advice spec="Class">Advice</advice>
```

Explanation:

Advice is expressed in characters. Regulate the classification of advice with the attribute spec.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
spec	attention, scene, feature	#REQUIRED	information related to locations that require caution, scenery related information, roadside nature and history, information related to characteristic elements, etc.

cautions

- (1) Frequently Occuring Accidents
- (2) Sudden Bend
- (3) Sudden Incline
- (4) Side Wind Caution
- (5) Fog Caution
- (6) Snow Storm Caution
- (7) Frozen Road Surface Caution
- (8) Animal Crossing Caution
- (9) Falling Rock Caution
- (10) Other (characters)

scenery

- (1) Good Scenery
- (2) Excellent Scenery
- (3) Other (characters)

feature

Elements such as roadside nature and history, road facilities characteristic of a certain place, etc. are expressed with characters.

Example:

```
<advice spec="attention">Accidents Occur Frequently</attention>
```

4.9.4 Information File**Description:**

This section gives the URL for the information file related to specific location information.

Notation Format:

```
<info-file href="URL">Information File Name</info-file>
```

or,

```
<info-file href="URL" />
```

Explanation:

List the information file URL in the attribute href. Element titles can be expressed in characters. File attributes are set apart by expansions in the notation.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Specify the information file URL.

Example:

For Images

```
<info-file href="http://www.test.com/test001/testimage.jpg" />
```

For Voice

```
<info-file href="http://www.test.com/test001/testvoice.avi" />
```

For Text

```
<info-file href="http://www.test.com/test001/testtext.txt" />
```

4.9.5 Target Period

Description:

This section gives the target period.

Notation Format:

```
<advice-period>Target Period</advice-period>
```

Explanation:

In recording the period, refer to the notation style in [2.2.4 Time length and period](#).

Example:

```
<advice-period>--1101/--0331</advice-period>
```

```
<!-- November 1 to March 31 -->
```

Road Web Markup Language (RWML)

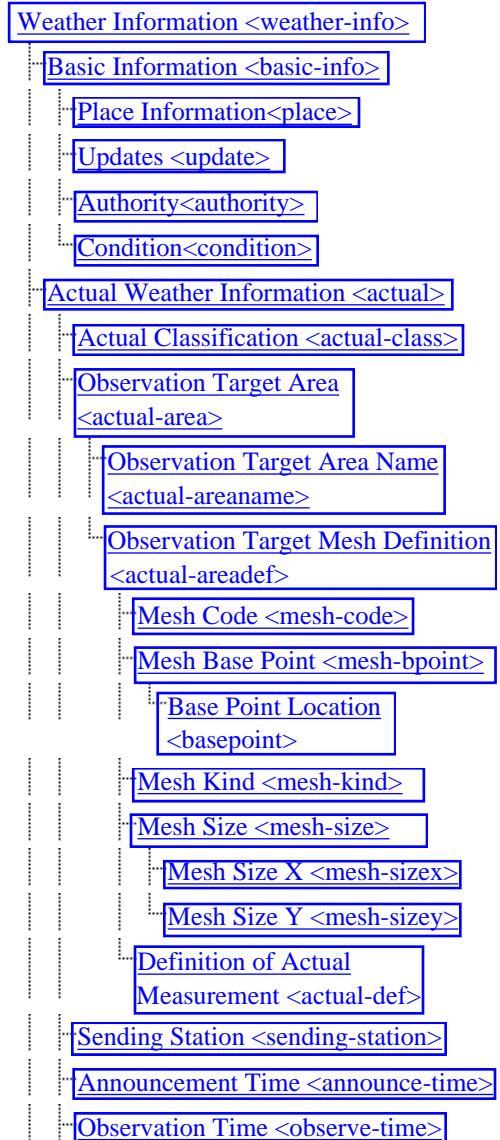
Specification Ver.0.80

RWML-WG Draft 2001-10-29

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5.3.6.2.9 [Snow Strength](#)

5.3.6.2.10 [Wind Direction](#)

5.3.6.2.11 [Wind Speed](#)

5.3.6.2.12 [Waves](#)

5.3.6.2.13 [Maximum Temperature](#)

5.3.6.2.13.1 [Forecast Location](#)

5.3.6.2.13.1.1 [Location Code](#)

5.3.6.2.13.2 [Target Time Zone](#)

5.3.6.2.13.3 [Temperture](#)

5.3.6.2.14 [Minimum Temperature](#)

5.3.6.2.14.1 [Forecast Location](#)

5.3.6.2.14.1.1 [Location Code](#)

5.3.6.2.14.2 [Target Time Zone](#)

5.3.6.2.14.3 [Temperture](#)

5.4 [Warnings](#)

5.4.1 [Sending Station](#)

5.4.2 [Announcement Date and Time](#)

5.4.3 [Warning](#)

5.4.3.1 [Target Area](#)

5.4.3.2 [Warning Kind](#)

Observation Information

<observe-info>

Observation Location

<observe-location>

Latitude<latitude>

Longitude <longitude>

Altitude <altitude>

Point Name <point-name>

Location Code <location-code>

Observation Element

<observe-element>

Mesh Complement

<mesh-complement>

Horizontal Index <i-index>

Vertical Index <j-index>

Surface Chart <surface-chart>

Upper Level Chart <upper-chart>

Synopsis <synopsis>

Weather <weather>

Temperature <temperature>

Sunshine Duration

<sunshine-duration>

Solar Radiation <solar-radiation>

Wind Direction <wind-direction>

Wind Speed <wind-speed>

Precipitation Volume

<precipitation>

Snow Depth <snow-depth>

Snow Fall <snow-fall>

Snow Strength <snow-strength>

Snowfall Chart <snowfall-chart>

Forecast <forecast>

Forecast Class <forecast-class>

Forecast Target Area

<forecast-area>

Forecast Target Area Name

<forecast-areaname>

Forecast Target Mesh

Definition <forecast-areadef>

Mesh Code <mesh-code>

Mesh Base Point <mesh-bpoint>

Base Point Location

<basepoint>

Mesh Kind <mesh-kind>

Mesh Size <mesh-size>

Mesh Size X <mesh-size-x>

5.4.4 [Warning Contents](#)

5.4.4.1 [Warning Heading](#)

5.4.4.2 [Warning Cause](#)

5.4.4.3 [Area, Time Period, Current Condition](#)

5.4.4.4 [Quantitative Warning](#)

5.4.4.5 [Disaster Warning](#)

5.4.4.6 [Warning, Other](#)

5. Weather Information

Description :

This section gives weather information.

Notation Format :

```
<weather-info>...</weather-info>
```

Explanation :

Note the individual elements that make up the construction of basic weather data: current weather condition data, weather forecast data, and warnings.

Example :

```
<!-- Giving current weather condition data -->
```

```
<weather-info>
  <basic-info>...</basic-info>
  <actual>...</actual>
</weather-info>
```

```
<!-- Giving forecast or warning data and weather forecast warnings -->
```

```
<weather-info>
  <basic-info>...</basic-info>
  <forecast>...</forecast>
  <warnings>...</warnings>
</weather-info>
```

5.1 Basic Information

Description :

This section gives basic information regarding weather.

Explanation :

Note the individual elements that make up weather information. Omit elements to correspond with [3. Basic Information Structure](#).

5.2 Actual Weather Information

Description :

This section gives actual weather data.

Notation Format :

```
<actual>Actual Weather Data</actual>
```

Explanation :

Note the individual observation elements related to current weather conditions. These are: actual class; actual target area, point, mesh data; sending station; announcement Date and Time ; and observation Date and Time .

Example :

```
<actual>
  <actual-class>Actual Automated Meteorological Data Acquisition
  System</actual-class>
  <actual-area>...</actual-area>
```

Mesh Size Y <mesh-size-y>

Forecast Definition <forecast-def>

Sending Station <sending-station>

Announcement Date and Time
<announce-time>

Forecast Date <forecast-date>

Forecast Target Time <target-time>

Forecast Target Date <target-date>

Forecast Start Date <start-date>

Forecast Interval <interval>

Forecast Time Definition
<forecast-timedef>

Forecast Times <times>

Forecast Information <forecast-info>

Mesh Complement
<mesh-complement>

Horizontal Index <i-index>

Vertical Index <j-index>

Forecast Element <forecast-element>

Surface Chart <surface-chart>

Upper Level Chart <upper-chart>

Synopsis <synopsis>

Weather forecast
<forecast-weather>

Temperature <temperature>

Precipitation Probability
<precip-prob>

Precipitation Volume
<precipitation>

Snow Fall <snow-fall>

Snow Strength <snow-strength>

Wind Direction <wind-direction>

Wind Speed <wind-speed>

Waves <waves>

Maximum Temperature
<max-temp>

Forecast Location
<forecast-location>

Latitude <latitude>

Longitude <longitude>

Altitude <altitude>

Point Name <point-name>

Location Code
<location-code>

Target Time Zone
<target-zone>

Temperature <temperature>

Omitted
 </actual>

5.2.1 Actual Classification

Description :

This section gives the actual weather condition name.

Notation Format :

<actual-class>*Actual Class*</actual-class>

Explanation :

Specify the actual weather condition with characters .

Example :

<actual-class>
 Actual Weather from Weather Authority</actual-class>

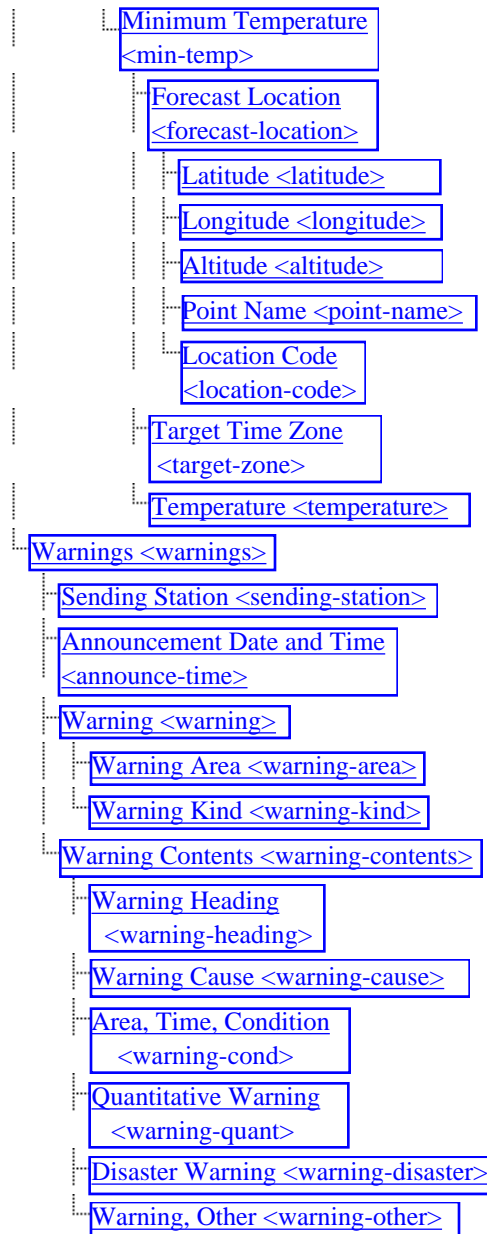


chart 5.1: Weather Information Tree Structure

<actual-class>Actual Weather from Automated Meteorological Data Acquisition System
 (AMDAS)</actual-class>

5.2.2 Observation Target Area, Point, Mesh Information

Description :

This section gives the observation target area or point.

Notation Format :

<actual-area>*Observation Target Area, Point, Mesh Data*</actual-area>

Explanation :

When the observation target is a point, notate with observation target area, point, mesh name. When the observation target is an area, notate with observation target area, point, mesh name as well as observation target mesh definition data.

Example :

<actual-area>
 <actual-areaname>Hokkaido (Ishikari, Sorachi, Shiribeshi Regions)</actual-areaname>
 </actual-area>

<actual-area>
 <actual-areaname>Sapporo Outskirts (5 km mesh) Sapporo Outskirts(5kmMesh
)</actual-areaname>

```
<actual-areadef>...</actual-areadef>
</actual-area>
```

5.2.2.1 Observation Target Area Name, Point Name, Mesh Name

Description :

This section gives the name of the observation target area or point.

Notation Format :

```
<actual-areaname>Observation Target Area, Point, Mesh Name</actual-areaname>
```

Explanation :

Express the observation target area or point name with characters .

Example :

```
<!-- Observation Target Area-->
<actual-areaname>Hokkaido (Ishikari, Sorachi, Shiribeshi Regions)</actual-areaname>
<!-- Observation Target Location -->
<actual-areaname>Sapporo Horse Race Track</actual-areaname>
<!-- Mesh Name -->
<actual-areaname>Sapporo Park (40 km radius around Sapporo City)
</actual-areaname>
```

5.2.2.2 Observation Target Mesh Definition

Description :

This section gives the contents of the observation target mesh.

Notation Format :

```
<actual-areadef>Observation Target Mesh Definition Data</actual-areadef>
```

Explanation :

Give the definition for a mesh based forecast (the entire mesh or a single point inside the mesh) by indicating the forecast target mesh with JIX X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), or with mesh base point, mesh type, and the range combination.

Example :

```
<actual-areadef>
  <mesh-bpoint>
    <latitude>41,30,00</latitude>
    <longitude>142,15,00</longitude>
    <basepoint>South Western Point</basepoint>
  </mesh-bpoint>
  <mesh-kind unit="km">5</mesh-kind>
  <mesh-size>
    <mesh-sizeex>10</mesh-sizeex>
    <mesh-sizeey>10</mesh-sizeey>
  </mesh-size>
  <actual-def>Inner-Mesh Average</actual-def>
</actual-areadef>
```

```
<actual-areadef>
  <mesh-code>std="jis-X0410-1976" comment="Sapporo Outskirts">6441</mesh-code>
  <actual-def>Central Point</actual-def>
</actual-areadef>
```

5.2.2.2.1 Mesh Code

Description :

This section gives the JIX X0410 based mesh code (local mesh code)

Notation Format :

```
<mesh-code std="Standard Names" comment="code supliment">Local Mesh Code </mesh-code>
```

Explanation :

Express the JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh) in a numerical value.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
std	CDATA	#REQUIRED	Input a standard name.
comment	CDATA	#IMPLIED	Input a comment.

Example :

```
<mesh-code std="jis-X0410-1976" comment="Sapporo Outskirts">6441</mesh-code>
```

5.2.2.2.2 Mesh Base Point

Description :

This section gives the survey target mesh base point data.

Notation Format:

```
<mesh-bpoint>
<latitude>Latitude</latitude>
<longitude>Longitude </longitude>
<altitude>Altitude </altitude>
<basepoint>Base Point Location</basepoint>
</mesh-bpoint>
```

Explanation :

Base point data is made up of point data and base point location data. Point data is expressed in latitude and longitude. Altitude can be used if necessary. For the geodetic system, use the International Reference Terrestrial Frame (IRTF) from the 1984 World Geodetic System (WGS 84) . Express the base point location data in terms of North-West Tip or South-West Tip .

Example :

```
<mesh-bpoint>
  <latitude>41,30,00</latitude>
  <longitude>142,15,00</longitude>
  <basepoint>South-West Tip </basepoint>
</mesh-bpoint>
```

5.2.2.2.1 Base Point Location

Description :

This section gives the location data for the mesh base point of the survey target.

Notation Format:

```
<basepoint>Base Point Location</basepoint>
```

Explanation :

Give the base point location data which clarifies the mesh base point. For the base point location, use the inner-mesh north west tip or the inner-mesh south west tip.

Example :

```
<basepoint>South West Tip</basepoint>
```

5.2.2.2.3 Mesh Kind

Description :

This section gives the type of mesh (length of one side of the mesh).

Notation Format :

```
<mesh-kind unit="km">Mesh Kind</mesh-kind>
```

Explanation :

Mesh type is expressed in units of km for the length of one side (mesh space) of the mesh.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	"km"	#FIXED	Display that the unit of the length of one side is in km.

Example :

```
<mesh-kind unit="km">50</mesh-kind>
```

5.2.2.2.4 Mesh Size

Description :

This section gives the range of the mesh.

Notation Format :

```
<mesh-size>
  <mesh-size>I (Horizontal) Lattice Direction Number</mesh-size>
  <mesh-size>J (Vertical) Lattice Direction Number</mesh-size>
</mesh-size>
```

Explanation :

Express the mesh range in terms of the mesh number for the I (horizontal) direction and the J (vertical) direction of the 2 dimensional plane rectangular sphere . Express the mesh number as an integer.

<Mesh Range> = <Horizontal Lattice Number>x<Vertical Lattice Number>

Example :

```
<mesh-size><mesh-size>10</mesh-size><mesh-size>10</mesh-size></mesh-size>
```

5.2.2.2.4.1 Mesh Size X

Description :

This section gives the range of the mesh horizontally.

Notation Format :

```
<mesh-size>I (Horizontal) Lattice Direction Number</mesh-size>
```

Explanation :

Express the I (horizontal) lattice number of the 2 dimensional plane rectangular sphere that makes up the mesh range as an integer.

Example :

```
<mesh-size>10</mesh-size>
```

5.2.2.2.4.2 Mesh Size Y

Description :

This section gives the range of the mesh vertically.

Notation Format :

```
<mesh-size>J (Vertical) Lattice Direction Number</mesh-size>
```

Explanation :

Express the J (vertical) lattice number of the 2 dimensional plane rectangular sphere that makes up the mesh range as an integer.

Example :

```
<mesh-size>10</mesh-size>
```

5.2.2.2.5 Definition of Actual Measurement

Description :

This section gives a definition of the information in the mesh derived forecast.

Notation Format :

```
<actual-def>Actual Definition</actual-def>
```

Explanation :

Regarding the mesh actual definition, indicate whether the actual element data gives the inner mesh average or data for a specific point on the mesh. Express this information in characters. Average, central point, tip. In the case of a tip, express the location as north west tip, south west tip, north east tip, or south east tip.

Example :

```
<actual-def>Central Point</actual-def>
<actual-def>Inner Mesh Average</actual-def>
```

5.2.3 Sending Station

Description :

This section gives the actual weather condition telegram sending station.

Notation Format :

```
<sending-station>Sending Station </sending-station>
```

Explanation :

Refer to the notation style in [3.3.1 Authority Name](#).

Example :

```
<sending-station>
  <authority-name>
    <organization>Sapporo District Meteorological Observatory</organization>
  </authority-name>
</sending-station>
```

5.2.4 Announcement Time

Description :

This section gives the actual weather data announcement date and time .

Notation Format :

```
<announce-time>Announcement Date and Time </announce-time>
```

Explanation :

Refer to the notation style in [2.2.1 date and time](#) .

Example :

```
<announce-time>1999-05-05T12:05+09:00</announce-time>
```

5.2.5 Observation Time

Description :

This section gives the actual weather data observation date and time .

Notation Format :

```
<observe-time>Observation Date and Time </observe-time>
```

Explanation :

Refer to the notation style in [2.2.1 Date and Time](#).

Example :

```
<observe-time>1999-05-05T12:00+09:00</observe-time>
```

5.2.6 Observation Information

Description :

This section gives the observation information.

Notation Format :

```
<observe-info>Observation Information</observe-info>
```

Explanation :

Observation information is targeted towards specific time information in real time (hour deliniated value), and is not considered in terms of the 24 hour day, or day deliniated value, which is a unit used in statistics. Observation information is expressed in terms of observation point and observation elements.

Example :

```
<observe-info>
  <observe-location>...</observe-location>
  <observe-element>...</observe-element>
</observe-info>
```

5.2.6.1 Observation Location

Description :

This section gives the observation point.

Notation Format :

```
<observe-location>
  <latitude>Latitude</latitude>
  <longitude>Longitude </longitude>
  <altitude>Altitude </altitude>
  <point-name>Point Name </point-name>
  <location-code>Location Code </location-code>
</observe-location>
```

Explanation :

The observation point is expressed using latitude, longitude, altitude, point name, and location code

Example :

As seen below, combine any important elements.

```
<observe-location>
  <location-code unit="amedas">14121</location-code>
</observe-location>
<observe-location>
  <latitude>41,30,00</latitude>
  <longitude>142,15,00</longitude>
  <location-code unit="amedas">99999</location-code>
</observe-location>
```

5.2.6.1.1 Location Code

Description :

This section gives the observation location number.

Notation Format :

```
<location-code>Observation Location Number</location-code>
```

Explanation :

Use a code system such as the Automated Meteorological Data Acquisition System (AMDAS) to notate the observation location number.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#REQUIRED	Indicate the code system used for expressing the location code.

Example :

```
<!-- Automated Meteorological Data Acquisition System (AMDAS) location number
(Ishikari) -->
<location-code unit="amedas">14121</location-code>
```

5.2.6.2 Observation Element

Description :

This section indicates the actual weather condition data observation elements.

Notation Format :

```
<observe-element>Observation Element Data</observe-element>
```

Explanation :

Notate observation element data from within the observation elements. For the observation element section, elements being observed at the observation site are noted. Observation elements not within the realm of the observation target at the observation site are not listed. When observation data was not able to be obtained (insufficient observation) for an observation element, use the data value [-] (hyphen). For observation element units, use units that correspond with the observation element.

Example :

```
<observe-element>
  <weather type="text">Snow</weather>
  <temperature>-5</temperature>
</observe-element>
```

5.2.6.2.1 Mesh Complement

Description :

This section gives the specific lattice within the mesh code as a numeric value column.

Notation Format :

```
<mesh-coplement>
  <i-index>Horizontal Index</i-index>
  <j-index>Vertical Index</j-index>
</mesh-coplement>
```

Explanation :

In order to specify a specific lattice that has been established with the observation target mesh definition and is inside the JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), list the elements (i,j) for a specific 2 dimensional plane rectangular sphere lattice where "i" is width and "j" is length.

```
<Mesh Supplement Data> = <Horizontal Index><Vertical Index>
```

Example :

```
<mesh-coplement>
  <i-index>2</i-index>
  <j-index>3</j-index>
</mesh-coplement>
```

5.2.6.2.1.1 Horizontal Index**Description :**

This section gives the horizontal index used in naming a specific lattice inside the numeric value column mesh code.

Notation Format :

```
<i-index>Horizontal Index</i-index>
```

Explanation :

In order to specify a specific lattice that has been established with the observation target mesh definition and is inside the JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), list the I (horizontal) value of a specific 2 dimensional plane rectangular sphere lattice.

Example :

```
<i-index>2</i-index>
```

5.2.6.2.1.2 Vertical Index**Description :**

This section gives the vertical index used in naming a specific lattice inside the numeric value column mesh code.

Notation Format :

```
<j-index>Vertical Index</j-index>
```

Explanation :

In order to specify a specific lattice that has been established with the observation target mesh definition and is inside the JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), list the J (vertical) value of a specific 2 dimensional plane rectangular sphere lattice .

Example :

```
<j-index>3</j-index>
```

5.2.6.2.2 Surface Chart**Description :**

This section gives the surface weather chart.

Notation Format :

```
<surface-chart src="URL">Image File Name</surface-chart>
```

Explanation :

Make the surface weather chart an image file with an appointed file name. Refer to URL notation style for the file naming method.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Give the image file location

Example :

```
<surface-chart src="www.rwmlserver.ne.jp/images/charta.jpg">1999-05-09 10:00 Surface
Weather Chart</surface-chart>
```

5.2.6.2.3 Upper Level Chart

Description :

This section gives the upper level weather chart.

Notation Format :

```
<upper-chart src="URL" kind="Appointed Chart">Image File Name</upper-chart>
```

Explanation :

Express the upper level weather chart in terms of image file and upper level weather chart classifications depending on the file name assignment. Follow URL notation style for the file naming method. The upper level weather chart class specification (850, 750, 700, 500, 300) corresponds to the attribute kind and is expressed in units of hpa.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Give the image file location.
kind	CDATA	#REQUIRED	Express the specification (850, 750, 700, 500, 300) in units of hpa.

Example :

```
<upper-chart src="www.rwmlserver.ne.jp/images/chartb.jpg" kind="750">1999-05-09
10:00 Upper Level Weather Chart(750hpa)</upper-chart>
```

5.2.6.2.4 Synopsis

Description :

This section gives the actual weather synopsis.

Notation Format :

```
<synopsis>Synopsis</synopsis>
```

Explanation :

Express actual synopsis in characters.

Example :

```
<synopsis>A high air pressure system is currently in effect, but cold air is
rising.</synopsis>
```

5.2.6.2.5 Weather

Description :

This section gives the observed weather.

Notation Format :

```
<weather type="specification Style">Weather</weather>
```

Explanation :

Express weather in characters. Express the contents in code or characters based on Japan Style Notation (15 classes), which sets surface weather observation rules. Japan Style Notation is located at [4.2.3 Weather](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
type	code, text	text	Specify weather information with code or characters corresponding with the 15 classes of Japan Style Notation.

Example :

```
<weather type="text">Fine Weather </weather>
```

5.2.6.2.6 Temperature

Description :

This section gives the observed temperature.

Notation Format :

```
<temperature unit="Unit">Temperature</temperature>
```

```
<temperature>Temperature</temperature>
```

Explanation :

Refer to [4.2.4 Temperature](#), temperature is always expressed in centigrade and value is expressed up to 1/10 of a degree. For temperatures below 0 degrees centigrade, attach a [-] (minus) before the number representing the temperature.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	Celsius, Fahrenheit	Celsius	Specify the temperature unit.

Example :

```
<temperature unit="Celsius">25.3</temperature>
```

```
<temperature>25.3</temperature>
```

5.2.6.2.7 Sunshine Duration

Description :

This section gives the observed sunshine duration

Notation Format :

```
<sunshine-duration unit="minute">Sunshine Duration</sunshine-duration>
```

```
<sunshine-duration>Sunshine Duration</sunshine-duration>
```

Explanation :

Express the sunshine duration 1 hour previous to observation in minutes.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	Specify the unit.

Example :

```
<sunshine-duration>50</sunshine-duration>
```

5.2.6.2.8 Solar Radiation

Description :

This section gives the observed solar radiation.

Notation Format :

```
<solar-radiation unit="MJ/m*m">Solar Radiation</solar-radiation>
```

```
<solar-radiation>Solar Radiation</solar-radiation>
```

Explanation :

Express the value for solar radiation the from the entire sky 1 hour previous to observation in units of MJ/m². Give the value up to 1/100 of a unit.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	Specify the unit.

Example :

```
<solar-radiation>0.23</solar-radiation>
```

5.2.6.2.9 Wind Direction

Description :

This section gives the observed wind direction with true north as a base.

Notation Format :

```
<wind-direction code="Notation Code">wind direction</wind-direction>
```

Explanation :

Portion off 16 sections of a circle in order to derive the unit for wind direction. Refer to [4.2.6 Wind Direction](#), using true north as the extreme top

section of the portioned off circle and going clockwise, specify each compass point of the circle and express the wind direction using the 16 compass points of the circle. Using the attribute code, specify whether numeric notation or alphabetic notation is used. In case of omission, it is understood that alphabetic code is being used.

When the weather is calm, use the numeric mark "00" / alphabetic mark "C".

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
code	num, alpha	alpha	Indicate whether the notation is a numeric code (number) or an alphabetic code (letter).

Example :

```
<wind-direction code="alpha">C</wind-direction>
```

or

```
<wind-direction code="num">00</wind-direction>
```

5.2.6.2.10 Wind Speed

Description :

This section gives the observed wind speed.

Notation Format :

```
<wind-speed>Wind Speed</wind-speed>
```

Explanation :

Refer to [4.2.7 Wind Speed](#), use m/s as the wind speed unit. Carry the value out to 1/10 of a m/s.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	Specify the unit.

Example :

```
<wind-speed>1.5</wind-speed>
```

5.2.6.2.11 Precipitation Volume

Description :

This section gives the volume of precipitation that reached the earth surface in units of time.

Notation Format :

```
<precipitation unit="mm" measure="Observation Method" span="Time Unit">Precipitation Volume</precipitation>
```

Explanation :

Following [4.2.9 Precipitation Volume](#), express the precipitation volume 1 hour previous to observation in units of mm. Give the value up to 1/10 of a mm. Observation decimal values less than 0.5 are rounded down to 0. Values from 0.5 to less than 1.0 are rounded to 0.5. When observation data is not obtainable due to impediments to observation, record "no data". Clarify the observation time unit using the attribute span. Indicate whether an observation is an automated observation or not in the attribute measure. In the case of observations made by a human being, clearly note that a human observation (manual) is being recorded. When it is unclear if the observation was made by a human being or an automated observing device, it is marked as an automatic observation (auto).

Attribute :

Attribute Name	Attribute Value	Abbreviated Time Value	Explanation
unit	CDATA	#IMPLIED	Specify the unit.
measure	auto, manual	auto	Snow volume meter observation (auto) or visual observation (manual) is described.

span	hourly, pre03, pre06, pre12, pre24, daily	hourly	1 hour previous precipitation amount(hourly), 3 hours previous precipitation amount (pre03h), 6 hours previous precipitation amount (pre06h), 12 hours previous precipitation amount (pre12h), 24 hours previous precipitation amount (pre24h), and daily precipitation (daily) are described.
------	---	--------	--

Example :

```
<precipitation measure="auto">10</precipitation>
```

5.2.6.2.12 Snow Depth

Description :

This section describes the depth of natural fallen snow that covers the ground.

Notation Format :

```
<snow-depth unit="cm" measure="Observation Method">Fallen Snow Depth</snow-depth>
```

Explanation :

Refer to [4.2.10 Snow Depth](#), describe fallen snow depth.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	The unit is Specified.
measure	auto, manual	auto	Indicate snow volume meter observation (auto) or visual observation (manual).

Example :

```
<snow-depth measure="manual">15</snow-depth>
```

5.2.6.2.13 Snow Fall

Description :

This section indicates the depth of fallen snow that piles up on the ground.

Notation Format :

```
<snow-falldepth unit="cm" measure="Observation Method" span="Measure Target Time Period ">Fallen Snow Depth</snow-fall>
```

Explanation :

Refer to [4.2.11 Snow Fall](#), the depth of fallen snow is described.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	The unit is Specified.
measure	auto, manual	auto	Indicate snow volume meter observation (auto) or visual observation (manual).
span	CDATA, hourly, daily21, daily09	hourlyauto	Refer to the notation style in 2.2.4 Time Length and Period , give the commencement time and conclusion time. The target time periods: 1 hour previous value (hourly), daily fallen snow amount: 21:00 (daily 21), and daily fallen snow amount: 09:00 (daily 09) are described.

Example :

```
<snow-fall measure="manual">20</snow-fall>
```

5.2.6.2.14 Snow Strength

Description :

Observed fallen snow strength is described.

Notation Format :

```
<snow-strength>Fallen Snow Strength</snow-strength>
```

Explanation :

Fallen snow strength is expressed in the following 4 classes: no fallen snow, weak snow, strong snow, snow storm. Fallen snow strength usually takes "cm/h" as a unit. However, application of this unit is difficult for the common user to comprehend. Thus, relating snowfall strength to vision (m), a visual expression is substituted.

Definition :

Snow Class	Standard Visibility Range	Snow Strength	Other
No Fallen Snow	Over 1000 m	Less than 0.1 cm/h	Precipitation at temperatures over 3 degrees C is rain.
Weak Snow	500 - 1000 m	0.1 - 1.0 cm/h	"" ""
Strong Snow	200 - 500m	Greater than 1.0 - 4.0 cm/h	"" ""
Snow Storm	Below 200m	Over 4.0 cm/h	"" ""

Example :

```
<snow-strength>Snow Storm</snow-strength>
```

5.2.6.2.15 Snowfall Chart

Description :

This section describes observed fallen snow actual condition (fallen snow strength) in a chart.

Notation Format :

```
<snowfall-chart src="URL">Fallen Snow Actual Condition File Name</snowfall-chart>
```

Explanation :

Refer to [5.2.6.2.14 Fallen Snow Strength](#), the fallen snow actual condition chart created image is made into an image file corresponding to the file name specification. Designation method follows URL notation style.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Specify the fallen snow actual condition file location.

Example :

```
<snowfall-chart src="http://rwmlserve.xxxx.or.jp/weather/snowfall/19990430/xxx.jpg">
Fallen Snow Actual Condition yy/mm/dd hh:mm</snowfall-chart>
```

5.3 Forecast

Description :

This section describes the forecast data pertaining to weather data.

Notation Format :

```
<forecast>Weather Actual Condition Data</forecast>
```

Explanation :

Forecast data elements related to the weather forecast (forecast class, forecast target area data, forecast location data, forecast mesh data, sending station, announcement date and time, and forecast date and time) are described.

Example :

```
<forecast>
  <forecast-class>Prefecture Weather Data (Meteorological Agency
Announcement)</forecast-class>
  <forecast-area>...</forecast-area>
  Omitted
</forecast>
```

5.3.1 Forecast Class

Description :

This section describes the name of the weather forecast.

Notation Format :

```
<forecast-class>Forecast Class</forecast-class>
```

Explanation :

Weather forecast class is expressed in characters.

Example :

```
<forecast-class>Prefecture Weather Forecast (Meteorological Agency
Announcement)</forecast-class>
<forecast-class>Weekly Weather Forecast (Meteorological Agency
Announcement)</forecast-class>
```

5.3.2 Forecast Target Area, Point, Mesh Information

Description :

Location data and names related to forecast target area, location, and mesh data are described.

Notation Format :

```
<forecast-area>...</forecast-area>
```

Explanation :

The forecast area is expressed in terms of "forecast target area, location, and mesh name data," and, "forecast target mesh definition data."

Example :

```
<forecast-area>
<forecast-areaname>Forecast Target Area, Location, and Mesh Name</forecast-areaname>
<forecast-areadef>...<forecast-areadef>
</forecast-area>
```

5.3.2.1 Forecast Target Area, Point, Mesh Name

Description :

This section describes forecast target area and point name.

Notation Format :

```
<forecast-areaname>Forecast Target Area, Location, and Mesh Name Data</forecast-areaname>
```

Explanation :

forecast target area and point name are expressed in characters.

Example :

```
<!-- forecast Target Area-->
<forecast-areaname>Hokkaido (Ishikari, Sorachi, Shiribeshi
Regions)</forecast-areaname>
<!-- forecast Target Location -->
<forecast-areaname>Sapporo Horse Race Track</forecast-areaname>
<!-- Mesh Name -->
<forecast-areaname>Sapporo Park (40 km radius around Sapporo)</forecast-areaname>
```

5.3.2.2 Forecast Target Mesh Definition

Description :

This section gives the definition for the forecast target mesh.

Notation Format :

```
<forecast-areadef>...</forecast-areadef>
```

Explanation :

The forecast target mesh is described with either JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), or a combination of mesh base point, mesh (lattice) type, and mesh range. The definition of the forecast from the corresponding mesh (entire mesh, single point within the mesh) is described.

Example :

```
<forecast-areadef>
  <mesh-bpoint>
```

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```
<latitude>41,30,00</latitude>
<longitude>142,15,00</longitude>
<basepoint>South West Tip</basepoint>
</mesh-bpoint>
<mesh-kind unit="km">5</mesh-kind>
<mesh-size>
  <mesh-size-x>10</mesh-size-x>
  <mesh-size-y>10</mesh-size-y>
</mesh-size>
<forecast-def>Inner Lattice Average </forecast-def>
</forecast-areadef>

<forecast-areadef>
  <mesh-code>std="jis-X0410-1976" comment="Sapporo Outskirts">6441</mesh-code>
  <forecast-def>Central Point</forecast-def>
</forecast-areadef>
```

5.3.2.2.1 Mesh Code

Description :

The JIS X0410 based mesh code (local mesh code) is described.

Notation Format :

```
<mesh-code std="standard name " comment="Code Supplement ">Mesh Code </mesh-code>
```

Explanation :

JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh) is expressed in numeric value.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
std	CDATA	#REQUIRED	Give a standard name.
comment	CDATA	#IMPLIED	Give a code.

Example :

```
<mesh-code std="jis-X0410-1976" comment="Sapporo Outskirts">6441</mesh-code>
```

5.3.2.2.2 Mesh Base Point

Description :

Data related to the mesh base point of the forecast target mesh is given.

Notation Format:

```
<mesh-bpoint>
  <latitude>Latitude</latitude>
  <longitude>Longitude </longitude>
  <altitude>Altitude </altitude>
  <basepoint>Base Point Location </basepoint>
</mesh-bpoint>
```

Explanation :

Data related to the base point consists of point data and base point location data. Point data is given in latitude and longitude. Altitude may be included if necessary. The International Reference Terrestrial Frame (IRTF) from the 1984 World Geodetic System (WGS 84) is used. Base point location data is expressed as the north west tip or south west tip.

Example :

```
<mesh-bpoint>
  <latitude>41,30,00</latitude>
  <longitude>142,15,00</longitude>
  <basepoint>South West Tip</basepoint>
</mesh-bpoint>
```

5.3.2.2.2.1 Base Point Location

Description :

Data relating to the mesh base point for the survey target mesh is described.

Notation Format:

<basepoint>*Base Point Location* </basepoint>

Explanation :

Base point location data that clarifies the mesh base point is described. For the base point location, a tip inside the lattice (the north west tip or the south west tip) is used.

Example :

<basepoint>North West Tip</basepoint>

5.3.2.2.3 Mesh Kind

Description :

Mesh kind (the length of one side of the lattice) is described.

Notation Format :

<mesh-kind unit="km">*Mesh Kind*</mesh-kind>

Explanation :

Mesh kind is given as the length of one side of the lattice (lattice interval) and is expressed in km.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	"km"	#FIXED	Show that the unit expressing the length of one side is in km.

Example :

<mesh-kind unit="km">50</mesh-kind>

5.3.2.2.4 Mesh Size

Description :

Mesh range is described.

Notation Format :

<mesh-size><mesh-size>*I (horizontal) Lattice Number*</mesh-size><mesh-size>*J (vertical) Lattice Number*</mesh-size></mesh-size>

Explanation :

Mesh range is expressed by the I (horizontal) value and J (vertical) value that make up a 2 dimensional plane rectangular sphere lattice . Describe the number of lattices as an integer.

<Mesh Range> = <Horizontal Mesh Number>x<Vertical Mesh Number>

Example :

<mesh-size><mesh-size>10</mesh-size><mesh-size>10</mesh-size></mesh-size>

5.3.2.2.5 Forecast Definition

Description :

This section gives the definition of information in the mesh forecast.

Notation Format :

<forecast-def>*Forecast Definition*</forecast-def>

Explanation :

The mesh forecast definition can contain data that either expresses the inner lattice average or data related to a specific point on the mesh. The information is expressed in characters: average, central point, tip. In the case of a tip, the location is described as: north west tip, south west tip, north east tip, south east tip, etc.

Example :

<forecast-def>Inner Mesh Average</forecast-def>

5.3.3 Sending Station

Description :

The weather forecast data telegram sending station is described.

Notation Format :

<sending-station>*Sending Station* </sending-station>

Explanation :

Refer to the notation style in [3.3.1 Authority Name](#).

Example :

```
<sending-station>
  <authority-name>
    <organization>Asahikawa Local Meteorological Observatory</organization>
  </authority-name>
</sending-station>
```

```
<sending-station>
  <authority-name>
    <organization>Japan Weather Association, Hokkaido Regional Office </organization>
  </authority-name>
</sending-station>
```

Reference:

A list of prefectural weather forecasts and corresponding announcement offices by region (in Hokkaido).

(items in quotes "" are temperature forecast locations).

```
<Soya District>(Wakkanai Local Meteorological Observatory)
Soya District (11016 Wakkanai)
```

```
<Kamikawa Rumoi District>(Asahikawa Local Meteorological Observatory)
Kamikawa District (12441 Asahikawa)
Rumoi District (13277 Rumoi)
```

```
<Ishikari Sorachi Shiribeshi District>(Sapporo District Meteorological Observatory)
Ishikari District (14162 Sapporo)
Sorachi District (15356 Iwamizawa)
Shiribeshi District (16217 Kucchan)
```

```
<Abashiri Kitami Monbetsu District>(Abashiri Local Meteorological Observatory)
Abashiri District (17341 Abashiri)
Kitami District (17521 Kitami)
Monbetsu District (17112 Monbetsu)
```

```
<Kushiro Nemuro Tokachi District>(Kushiro Local Meteorological Observatory)
Kushiro District (19431 Kushiro)
Nemuro District (18272 Nemuro)
Tokachi District (20431 Obihiro)
```

```
<Iburi Hidaka District>(Muroran Local Meteorological Observatory)
Iburi District (21323 Muroran)
Hidaka District (22327 Urakawa )
```

```
<Oshima Hiyama District >(Hakodate Marine Meteorological Observatory)
Oshima District (23232 Hakodate)
Esashi District (24217 Esashi)
```

A list of weekly weather forecasts and corresponding announcement offices by region (in Hokkaido).

(items in quotes "" are temperature forecast locations).

```
Soya District (Wakkanai)
(Wakkanai Local Meteorological Observatory)
```

Kamikawa Rumoi District (Asahikawa)
(Local Meteorological Observatory)

Ishikari Sorachi Shiribeshi District (Sapporo)
(Sapporo District Meteorological Observatory)

Abashiri Kitami Monbetsu District (Abashiri)
(Abashiri Local Meteorological Observatory)

Kushiro Nemuro Tokachi District (Kushiro)
(Kushiro Local Meteorological Observatory)

Iburi Hidaka District (Muroran)
(Muroran Local Meteorological Observatory)

Oshima Hiyama District (Hakodate)
(Hakodate Marine Meteorological Observatory)

5.3.4 Announcement Date & Time

Description :

The actual weather condition data announcement date and time is described.

Notation Format :

`<announce-time>Announcement Date and Time</announce-time>`

Explanation :

Refer to the notation style in [2.2.1 Date & Time](#).

Example :

`<announce-time>1999-05-05T12:05+09:00</announce-time>`

5.3.5 Forecast Date

Description :

This section describes the forecast date and time.

Notation Format :

`<forecast-date>Forecast Date and Time </forecast-date>`

Explanation :

Express the forecast date and time by forecast target time or forecast date and time (when there are repeating elements).

Example :

`<forecast-date>
 <target-time>1999-05-06T14:00+09:00</target-time>
</forecast-date>`

or

`<forecast-date>
 <target-date>
 <start-date>1999-05-06T00:00+09:00</start-date>
 <interval>PT24H</interval>
 <forecast-timedef>specific time zone </forecast-timedef>
 <times>2</times>
 </target-date>
</forecast-date>`

5.3.5.1 Forecast Target Time

Description :

The forecast target time is described.

Notation Format :

`<target-time> forecast target time </target-time>`

Explanation :

Refer to the notation style in [2.2.1 Date and Time](#) or in [2.2.4 Time Length and Period](#). This is used for a time or time zone specific forecast. When using this specification, there are no repeating elements.

Example :

```
<target-time>1999-05-06T11:00+09:00/1999-05-06T24:00+09:00</target-time>
<target-time>1999-05-06T14:00+09:00</target-time>
```

5.3.5.2 Forecast Target Date

Description :

Forecast target date and time is described.

Notation Format :

```
<target-date> Forecast target date and time </target-date>
```

Explanation :

Corresponding to forecast commencement date and time, forecast time intervals, forecast target time zone / time definition data, and forecast repetitions, this is used when a forecast gathered from forecast target information that describes a specific time or a specific time zone will be repeated.

Example :

```
<target-date>
  <start-date>1999-05-06T00:00+09:00</start-date>
  <interval>PT24H</interval>
  <forecast-timedef>specific time zone </forecast-timedef>
  <times>2</times>
</target-date>
```

5.3.5.2.1 Forecast Start Date

Description :

The forecast commencement date and time are described.

Notation Format :

```
<start-date> forecast commencement date and time </start-date>
```

Explanation :

Refer to the notation style in [2.2.1 Date and Time](#).

Example :

```
<start-date>1999-05-06T00:00+09:00</start-date>
```

5.3.5.2.2 Forecast Interval

Description :

The forecast interval is described.

Notation Format :

```
<interval> forecast time interval </interval>
```

Explanation :

Refer to the notation style (1) from [2.2.4 Time Length and Period](#).

Example :

```
<interval>P1D</interval>
<interval>PT24H</interval>
```

5.3.5.2.3 Forecast Time Definition

Description :

The forecast for a specific time based on the forecast time interval or the forecast for a specific time zone based on the forecast time interval, is described in characters. The data noted here is applied to all forecast elements presented henceforth. However, when time or time zone is listed among the forecast elements, the listed data takes priority.

Notation Format :

```
<forecast-timedef>Forecast Target Time Zone / Time Definition Data</forecast-timedef>
```

Explanation :

The forecast for a specific time based on the forecast time interval or the forecast for a specific time zone based on the forecast time interval, is notated in characters. The data noted here is applied to all forecast elements presented henceforth. However, when time or time zone is listed among the forecast elements, the listed data takes priority.

Example :

```
<forecast-timedef>specific time zone </forecast-timedef>
```

5.3.5.2.4 Forecast Times

Description :

The forecast repetition number is described.

Notation Format :

```
<times>Forecast Repetition Number</times>
```

Explanation :

The forecast repetition number is expressed as an integer value.

Example :

```
<times>3</times>
```

5.3.6 Forecast Information

Description :

This section describes forecast data. When the forecast target is a mesh, data which gives an inner mesh location is also included.

Notation Format :

```
<forecast-info>forecast data </forecast-info>
```

Explanation :

The forecast target area / point / mesh complement data expresses the inner mesh horizontal and vertical location. For the forecast elements, list forecast target elements (weather, temp, etc.).

Example :

```
<forecast-info>
  <mesh-complement>Mesh supplement data </mesh-complement>
  <forecast-element>Forecast Element Index</forecast-element>
</forecast-info>
```

5.3.6.1 Mesh Complement

Description :

A specific lattice inside the mesh code is described in a numeric value column.

Notation Format :

```
<mesh-complement>
  <i-index>Horizontal Index</i-index>
  <j-index>Vertical Index</j-index>
</mesh-complement>
```

Explanation :

In order to specify a specific lattice that has been established with the observation target mesh definition and is inside the JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), list the I (horizontal) and J (vertical) value of a specific 2 dimensional plane rectangular sphere lattice. i and j express the elements I (horizontal) and J (vertical) respectively, and the mesh that includes the base point is described as (1,1).

```
<Mesh supplement data > = <Horizontal Index><Vertical Index>
```

Example :

```
<mesh-complement>
  <i-index>2</i-index>
  <j-index>3</j-index>
</mesh-complement>
```

5.3.6.1.1 Horizontal Index

Description :

The horizontal index that points to a specific lattice inside the mesh code is described in a numeric value column.

Notation Format :

<i-index>*Horizontal Index*</i-index>

Explanation :

In order to specify a specific lattice that has been established with the observation target mesh definition and is inside the JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), list the I (horizontal) value of a specific 2 dimensional plane rectangular sphere lattice .

Example :

<i-index>2</i-index>

5.3.6.1.2 Vertical Index

Description :

The vertical index that points to a specific mesh inside the mesh code is described in a numeric value column.

Notation Format :

<j-index>*Vertical Index*</j-index>

Explanation :

In order to specify a specific lattice that has been established with the observation target mesh definition and is inside the JIS X0410 based mesh code (base area mesh, integrated area mesh, divided area mesh), list the J (vertical) value of a specific 2 dimensional plane rectangular sphere lattice.

Example :

<j-index>3</j-index>

5.3.6.2 Forecast Element

Description :

The forecast elements of weather forecast data are described.

Notation Format :

<forecast-element>*Forecast Element* </forecast-element>

Explanation :

The elements from inside the forecast elements list are listed.

Units corresponding to the forecast element are used. In the case that the forecast repeats 2 or more times and when there no forecast data element for the specific repetition number, the forecast element is not listed.

Example :

```
<forecast-element>
  <forecast-weather telop="2035">north east wind, clouds, morning night, rain
</forecast-weather>
</forecast-element>
```

5.3.6.2.1 Surface Chart

Description :

The surface weather forecast chart is described.

Notation Format :

<surface-chart src="*URL*">*Image File Name*</surface-chart>

Explanation :

The surface weather forecast chart is made into an image file corresponding to the file name specification. The specification method follows URL notation method.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Specify the image file location.

Example :

```
<surface-chart src="www.rwmlserver.ne.jp/images/charta.jpg">1999-05-09 10:00 Surface
Chart</surface-chart>
```

5.3.6.2.2 Upper Level Chart

Description :

An upper level surface weather forecast chart is described.

Notation Format :

```
<upper-chart src="URL" kind="specification">Image File Name</upper-chart>
```

Explanation :

Upper level weather forecast charts are expressed as image files and upper level weather charts in accordance with the file name specification. File specification follows URL notation style. Upper level weather chart class specification (850, 750, 700, 500, 300) corresponding to attribute kind is expressed in units of hpa.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Image file location is Specified.
kind	CDATA	#REQUIRED	specification (850, 750, 700, 500, 300) is expressed in units of hpa.

Example :

```
<upper-chart src="www.rwmlserver.ne.jp/images/chartb.jpg" kind="750">
```

```
19999-05-09 10:00 upper level weather forecast chart (750hpa)</upper-chart>
```

5.3.6.2.3 Synopsis

Description :

The forecast synopsis for the weather forecast is expressed.

Notation Format :

```
<synopsis>Synopsis</synopsis>
```

Explanation :

The forecast synopsis is expressed in characters.

Example :

```
<synopsis>
```

For one week, due to influence from a valley of air pressure, on the 16th rain fell in some places, and for the second half of the time period there were many unstable days with off and on rain.

Around the 19th the whole area saw rainfall.

The maximum and minimum temperatures will both be lower than average until the 16th. After that, highs and lows can be expected to surpass average.

```
</synopsis>
```

5.3.6.2.4 Weather Forecast

Description :

The weather related to the weather forecast is described.

Notation Format :

```
<forecast-weather telop="Television Opaque Projector Number" />
```

```
<forecast-weather>Weather forecast </forecast-weather>
```

```
<forecast-weather telop="Television Opaque Projector Number" >Weather forecast </forecast-weather>
```

Explanation :

Combine terminology such as "fine", "cloudy", "rain", "snow", etc. that describes weather within the forecast period and within the range of the forecast and words that indicate phenomenon occurrence time period such as "short time", "sometimes", "after", etc.

Description of the weather up to seven days ahead is described by repeating the elements seven times.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
telop	CDATA	#IMPLIED	A television opaque projector number is Specified.

Example :

```
<forecast-weather telop="2035" >north west wind, cloudy, morning night, rain </forecast-weather>
```

Reference:

television opaque projector number

The television opaque projector number is expressed in a 4 figure list like: "north west wind, cloudy, morning night, rain (203 5)". It is also acceptable to use only the first three figures. The first three figures stand for upcoming weather. The last figure expresses if there is rain data or not in the forecast. (0: no rain, 2: rain in some places, 5: rain)

```
100    Clear skies
101    Clear skies, partially cloudy
102    Clear skies spots of rain
103    Clear skies with intermittent rain
104    Clear skies with spots of snowfall
105    Clear skies with intermittent snowfall
106    Clear skies with spots of rain or snow (mainly rain)
107    Clear skies with intermittent rain or snow (mainly rain)
108    Clear skies with spots of rain or thunderstorms
140    Clear skies with intermittent rain and some thunder
160    Clear skies with spots of snow or rain (mainly snow)
170    Clear skies with intermittent snow or rain (mainly snow)
```

The remaining portion of the list is omitted.

Also, in the case of a prefecture weather forecast (Meteorological Agency announcement) whether or not data relating to "wind" will be included in the weather presentation becomes a matter of selection for the data announcer

The "north or north east wind" part of a weather forecast is indicated in a weather forecast in the following way: "north and north east wind, cloudy, intermittent snow or rain". Portions of a forecast presented with a television opaque projector and portions presented in characters do not always correspond completely with each other (presentations in characters are more detailed). For usage, refer to either section is acceptable. Use terms "later", "intermittent ---", and "spots of ---" as shown below.

Later =====> "cloudy, rain later" when rain fall is expected in the latter half of the forecast period (half).

Intermittent =====> "cloudy, intermittent rain" when the following situation is expected: rain falls intermittently, and the combined total rainfall time is more than 1/4 but less than 1/2 of the forecast period.

Spots of =====> "cloudy, spots of rain" when continuous rain fall is expected to occur for one period of less than 1/4 of the forecast period.

5.3.6.2.5 Temperature

Description :

Temperature related to the weather forecast is described.

Notation Format :

```
<temperature unit="unit" time1="forecast Time Supplement " time2="forecast Time Zone Supplement ">Temperature</temperature>
<temperature>Temperature </temperature>
```

Explanation :

Refer to [4.2.4 Temperature](#), temperature is expressed in centigrade. For temperatures of less than zero degrees centigrade, a [-] (minus) mark is included before the number representing the temperature. Decimal values can be omitted. When the definition information from [5.3.5 Forecast Date](#) is different from the forecast situation, include the data following the notation style from [2.2.1 Date and Time](#) or the notation style (2) from [2.2.4 Time Length and Period](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	Celsius, Fahrenheit	Celsius	The temperature unit is Specified.
time1	CDATA	#IMPLIED	The forecast target time is described.
time2	CDATA	#IMPLIED	The forecast target time zone is described.

Example :

```
<temperature unit="Celsius"
time2="1999-05-05T06:00+09:00/1999-05-05T12:00+09:00">25.3</temperature>
```

```
<temperature>25.3</temperature>
```

5.3.6.2.6 Precipitation Probability

Description :

The precipitation probability portion of the weather forecast is described.

Notation Format :

```
<precip-prob time1="Forecast Time Supplement" time2=" forecast time zone supplement ">Precipitation Probability</precip-prob>
```

Explanation :

Precipitation probability is expressed in a 4 digit number. Precipitation probability forecast value is listed in the 3 digits that come after the 1 digit number that discriminates among "rain, rain or snow, snow or rain, snow". The precipitation type discernment number is "0" for rain, "1" for "rain or snow", "2" for "snow or rain", and "3" for "snow". When the definition information from [5.3.5 Forecast Date](#) is different from the forecast situation, include the data following the notation style from [2.2.1 Date and Time](#) or the notation style (2) from [2.2.4 Time Length and Period](#). When "0000" is recorded, the rain precipitation probability is described as "0%".

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
time1	CDATA	#IMPLIED	The forecast target time is described.
time2	CDATA	#IMPLIED	The forecast target time zone is described.

Example :

```
<!-- Rain Only -->
<precip-prob>1000</precip-prob>
<!-- Rain or Snow -->
<precip-prob>1001</precip-prob>
```

5.3.6.2.7 Precipitation Volume

Description :

The precipitation volume portion of the weather forecast is described.

Notation Format :

```
<precipitation unit="mm" time2=" forecast time zone supplement ">Rainfall Amount</precipitation>
```

Explanation :

Rainfall amount is expressed in mm. When the definition information in [5.3.5 Forecast Date](#) is different from the forecast condition, input the data following the notation style (2) in [2.2.4 Time Length and Period](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	Specify the unit.
time2	CDATA	#IMPLIED	The forecast target time zone is described.

Example :

```
<precipitation measure="auto">10</precipitation>
```

5.3.6.2.8 Snow Fall

Description :

The snowfall depth portion of the weather forecast is described.

Notation Format :

```
<snow-fall unit="cm" time2=" forecast time zone supplement ">fallen snow amount </snow-fall>
```

Explanation :

Snowfall depth is expressed in cm. When the snowfall depth is less than 1 cm, it is recorded as 0 cm. When there is no snowfall, "non" is recorded. When the definition information in [5.3.5 Forecast Date](#) is different from the forecast situation, input the data following the notation style (2) in [2.2.4 Time Length and Period](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	Specify the unit.
time2	CDATA	#IMPLIED	The forecast target time zone is described.

Example :

```
<snow-fall>10</snow-fall>
```

5.3.6.2.9 Snow Strength

Description :

The information for the fallen snow strength portion of the weather forecast is described.

Notation Format :

```
<snow-strength time1="Forecast Time Supplement" time2=" forecast time zone supplement ">Fallen Snow Strength</snow-strength>
```

Explanation :

Fallen snow strength is expressed in the following 4 classes: no fallen snow, weak snow, strong snow, snow storm. (The same as the definition in [5.2.6.2.14 Fallen Snow Strength](#))

When the definition information in [5.3.5 Forecast Date](#) is different from the forecast condition, include the data following the notation style from [2.2.1 Date and Time](#) or the notation style (2) in [2.2.4 Time Length and Period](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
time1	CDATA	#IMPLIED	The forecast target time is described.
time2	CDATA	#IMPLIED	The forecast target time zone is described

Example :

```
<snow-strength>snow storm </snow-strength>
```

5.3.6.2.10 Wind Direction

Description :

Using true north as a base, the wind direction is expressed.

Notation Format :

```
<wind-direction>Wind Direction</wind-direction>
```

```
<wind-direction direc="Direction Division" windc=" forecast ">Wind Direction</wind-direction>
```

```
<wind-direction direc="Direction Division" windc=" forecast " time1=" forecast time supplement " time2="Forecast Time Zone Supplement">wind direction</wind-direction>
```

Explanation :

A circle is portioned off into 16 sections in order to derive the unit for wind direction. Refer to [4.2.6 Wind Direction](#), using true north as the extreme top section of the portioned off circle and going clockwise, each section of the circle is Specified and the wind direction is expressed using the 16 sections of the circle. When detailed classification is not possible, 8 sections can be used. In such a case, the fact that 8 direction divisions are being used is recorded in the attribute direction. When this data is omitted, it is understood that there are 16 divisions. Whether numeric notation or alphabetic notation is used is specified in the attribute code. In case of omission, it is understood that alphabetic code is being used. Whether the forecast information is an average or a maximum is listed as an appropriate character in the attribute windc.

Average

Maximum

When the definition information in [5.3.5 Forecast Date](#) is different from the forecast condition, include the data following the notation style from [2.2.1 Date and Time](#) or the notation style (2) in [2.2.4 Time Length and Period](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
code	num, alpha	alpha	The notation indicates numeric code or alphabetic code.

direc	08, 16	16	Direction division is described. 08 = 8 directions and 16 = 16 directions. When there is no specification, 16 direction divisions are assumed.
windc	average, max	average	Whether the forecast information is an average or a maximum is described.
time1	CDATA	#IMPLIED	The forecast target time is described.
time2	CDATA	#IMPLIED	The forecast target time zone is described

Example :

Any of the following styles can be used:

```
<wind-direction code="alpha">NNE</wind-direction>
<wind-direction code="alpha" direc="08" >N</wind-direction>
<wind-direction code="alpha" windc="max" >S</wind-direction>
<wind-direction code="alpha" direc="08"
time1="1999-05-05T12:00+09:00">N</wind-direction>
<wind-direction code="alpha" direc="08"
time2="1999-05-05T12:00+09:00/1999-05-05T13:00+09:00">N</wind-direction>
```

5.3.6.2.11 Wind Speed

Description :

Information pertaining to the wind speed portion of the weather forecast is described.

Notation Format :

```
<wind-speed unit="m/s" time1=" forecast time supplement " time2=" forecast time zone supplement ">Wind Speed</wind-speed>
```

Explanation :

Refer to [4.2.7 Wind Speed](#), wind speed is expressed in m/s. When the definition information in [5.3.5 Forecast Date](#) is different from the forecast condition, include the data following the notation style from [2.2.1 Date and Time](#) or the notation style (2) in [2.2.4 Time Length and Period](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#IMPLIED	The unit is Specified
windc	average, max	average	Whether the forecast information is an average or a maximum is described.
time1	CDATA	#IMPLIED	The forecast target time is described.
time2	CDATA	#IMPLIED	The forecast target time zone is described.

Example :

```
<wind-speed>1.5</wind-speed>
```

5.3.6.2.12 Waves

Description :

Information pertaining to the waves portion of the weather forecast is described.

Notation Format :

```
<waves unit="m" time1=" forecast time supplement " time2=" forecast time zone supplement ">Waves </waves>
```

Explanation :

The significant wave height expected within the forecast target period and within the forecast target sea area is expressed in characters. The maximum value for the significant wave height is expressed in units of m, and the value is expressed up to 1/10 of an m. When the observation value is lower than 3 m, it takes the unit 0.5 m. Values over 3 m take the unit 1 m. When the definition information in is different from the forecast condition, include the data following the notation style from [2.2.1 Date and Time](#) or the notation style (2) in [2.2.4 Time Length and Period](#).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation

time1	CDATA	#IMPLIED	The forecast target time is described.
time2	CDATA	#IMPLIED	The forecast target time zone is described.

Example :

```
<waves>2 meter waves, later 3 meter waves. However, waves in the shore area are lower</waves>
```

5.3.6.2.13 Maximum Temperature

Description :

Data relating to the weather forecast maximum temperature is described.

Notation Format :

```
<max-temp>maximum temperature </max-temp>
```

Explanation :

Point name, target time, and maximum temperature are expressed in characters.

Example :

```
<max-temp>
  <forecast-location>forecast Location</forecast-location>
  <target-zone>Target Time</target-zone>
  <temperatures>Temperature</temperatures>
</max-temp>
```

5.3.6.2.13.1 Forecast Location

Description :

The forecast target location is described.

Notation Format :

```
<forecast-location>
<latitude>Latitude</latitude>
<longitude>Longitude</longitude>
<altitude>Altitude</altitude>
<point-name>Point Name</point-name>
<location-code>Location Code</location-code>
</forecast-location>
```

Explanation :

The forecast target latitude, longitude, altitude, point name, location code are listed.

Example :

```
<forecast-location>
  <location-code unit="amedas">14121</location-code>
</forecast-location>
```

5.3.6.2.13.1.1 Location Code

Description :

The forecast location code is described.

Notation Format :

```
<location-code>Forecast Location Code</location-code>
```

Explanation :

The location code for the forecast location is listed using a system like the AMDAS (Automated Meteorological Data Acquisition System).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#REQUIRED	The code system used for location code notation is described.

Example :

```
<!-- AMDAS Location Code (Ishikari) -->
```

```
<location-code unit="amedas">14121</location-code>
```

5.3.6.2.13.2 Target Time Zone

Description :

The forecast (maximum temperature) time zone is described.

Notation Format :

```
<target-zone>target time zone </target-zone>
```

Explanation :

The forecast (maximum temperature) time zone is expressed in characters. To express the time zone, the notation style (2) in [2.2.4 Time Length and Period](#) or the following notation style is used: morning (00:00-09:00), daytime (09:00-18:00), 24 hours (00:00-24:00)

Example :

```
<target-zone>1999-05-05T06:00+09:00/1999-05-05T14:00+09:00</target-zone>
```

```
<target-zone>Daytime</target-zone>
```

5.3.6.2.13.3 Temperature

Description :

Temperature is described.

Notation Format :

```
<temperature unit="unit ">temperature </temperature>
```

Explanation :

Refer to [4.2.4 Temperature](#), temperature is expressed in centigrade and a [-] (minus) sign is attached to numbers representing temperatures below 0 degrees centigrade.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	Celsius, Fahrenheit	Celsius	The temperature unit is specified.

Example :

```
<temperature>36</temperature>
```

5.3.6.2.14 Minimum Temperature

Description :

Data related to the weather forecast minimum temperature is described.

Notation Format :

```
<min-temp>minimum temperature </min-temp>
```

Explanation :

Point name, target time, and minimum temperature is expressed in characters.

Example :

```
<min-temp>
  <forecast-location>forecast Location</forecast-location>
  <target-zone>Target Time</target-zone>
  <temperatures>temperature </temperatures>
</min-temp>
```

5.3.6.2.14.1 Forecast Location

Description :

The forecast target location is described.

Notation Format :

```
<forecast-location>
  <latitude>Latitude</latitude>
  <longitude>Longitude</longitude>
  <altitude>Altitude</altitude>
  <point-name>Point Name</point-name>
```

```
<location-code>Location Code</location-code>
</forecast-location>
```

Explanation :

The forecast target latitude, longitude, altitude, point name, location code are listed.

Example :

```
<forecast-location>
  <latitude>41,30,00</latitude>
  <longitude>142,15,00</longitude>
  <point-name>Ishikari</point-name>
  <location-code unit="amedas">14121</location-code>
</forecast-location>
```

5.3.6.2.14.1.1 Location Code

Description :

The forecast location code is described.

Notation Format :

```
<location-code>Forecast Location Code</location-code>
```

Explanation :

The location code for the forecast location is listed using a system like the AMDAS (Automated Meteorological Data Acquisition System).

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	CDATA	#REQUIRED	The code system used for location code notation is described.

Example :

```
<!-- AMDAS (Automated Meteorological Data Acquisition System) Location Code
(Ishikari) -->
<location-code unit="amedas">14121</location-code>
```

5.3.6.2.14.2 Target Time Zone

Description :

The forecast (minimum temperature) time zone is described.

Notation Format :

```
<target-zone>target time zone </target-zone>
```

Explanation :

The forecast (minimum temperature) time zone is expressed in characters. To express the time zone, the notation style (2) in [2.2.4 Time Length and Period](#) or the following notation style is used: morning (00:00-09:00), daytime (09:00-18:00), 24 hours (00:00-24:00)

Example :

```
<target-zone>1999-05-05T06:00+09:00/1999-05-05T14:00+09:00</target-zone>
<target-zone>24 Hours</target-zone>
```

5.3.6.2.14.3 Temperature

Description :

Minimum temperature is described.

Notation Format :

```
<temperature unit="Unit">temperature </temperature>
```

Explanation :

Refer to [4.2.4 Temperature](#), temperature is expressed in centigrade and a [-] (minus) sign is attached to numbers representing temperatures below 0 degrees centigrade.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
unit	Celsius, Fahrenheit	Celsius	Temperature unit is specified.

Example :

```
<temperature>-40</temperature>
```

5.4 Warnings

Description :

Data relating to announced warnings is described.

Notation Format :

```
<warnings>Warning Data</warnings>
```

Explanation :

Warnings are made up of sending station, announcement date and time, warnings, and warning information. Regarding the expression of the warning data set here, on the precondition that the user acquires the newest data, expressions pertaining to the warning release are not included.

Example :

```
<warnings>
  <sending-station>Sending Station </sending-station>
  <announce-time> announcement date and time </announce-time>
  <warning>...</warning>
  <warning-contents>...</warning-contents>
</warnings>
```

5.4.1 Sending Station

Description :

The warning announcer (the sender of a weather station telegram) is described.

Notation Format :

```
<sending-station>Sending Station</sending-station>
```

Explanation :

Refer to the notation in [3.3.1 Authority Name](#).

Example :

```
<sending-station>
  <authority-name>
    <organization>Sapporo District Meteorological Observatory</organization>
  </authority-name>
</sending-station>
```

5.4.2 Announcement Date and Time

Description :

The warning announcement date and time is described.

Notation Format :

```
<announce-time>Announcement Date and Time</announce-time>
```

Explanation :

Refer to the notation style in [2.2.1 Date and Time](#).

Example :

```
<announce-time>1999-05-05T12:05+09:00</announce-time>
```

5.4.3 Warning

Description :

The warning target area and warning classification are described.

Notation Format :

```
<warning>Warning</warning>
```

Explanation :

The target area and warning classification are listed.

Example :

```
<warning>
  <warning-area>Target Area</warning-area>
  <warning-kind>Warning Classification</warning-kind>
</warning>
```

5.4.3.1 Target Area

Description :

The warning target area is described.

Notation Format :

```
<warning-area>Target Area</warning-area>
```

Explanation :

The target area is listed based on the area code observation set by the Meteorological Agency.

Example: Area Code List

(Sapporo District Meteorological Observatory)

Area Name(Subdivision)	area code
Ishikari (Primary Subdivision)	1400
North Ishikari (Secondary Subdivision)	1410
Central Ishikari (Secondary Subdivision)	1420
South Ishikari (Secondary Subdivision)	1430
Coastal Waters (Secondary Subdivision)	1410

Example :

```
<!-- North Ishikari -->
<warning-area>1410</warning-area>
```

5.4.3.2 Warning Kind

Description :

Warning type is described.

Notation Format :

```
<warning-kind>Warning Kind</warning-kind>
```

Explanation :

Warnings are listed by using the following classes.

Warning: snow storm, heavy rain, flood, storm, heavy snow, waves, high tide

Caution: heavy rain, heavy snow, snowstorm, thunder, strong wind, waves, snow

melting, flood, high tide,

dense fog, dryness, snowslide, low temperature, frost, snow accretion, other

Expressions related to warning releases are not used here.

Example :

```
<warning-kind>Snow Storm Warning</warning-kind>
```

```
<warning-kind>Strong Wind and Wave Caution</warning-kind>
```

5.4.4 Warning Contents

Description :

The content of a warning is described.

Notation Format :

```
<warning-contents>Warning Content</warning-contents>
```

Explanation :

The warning content expresses the weather announcement content in terms of "title", "cause, etc.", "area, time period, current condition", "quantity forecast", and "disaster prevention matters". The omission of "cause, etc.", "area, time period, current condition", "quantity forecast", and "emergency prevention matters" can occur.

Example :

```
<warning-contents>
  <warning-heading>From now onward and all day tomorrow, south and south east wind
will be strong and waves will be high.</warning-heading>
  <warning-cause>Air pressure becomes critical.</warning-cause>
  <warning-cond>From now onward and all day tomorrow in the Ishikari, Sorachi, and
Shiribeshi regions, south and south east winds will be strong and waves will be high
</warning-cond>
  <warning-quant>The maximum wind speed on land will be 10 - 13 m. At sea it will be
13 - 17 m, with high waves. </warning-quant>
  <warning-disaster>gust, high waves, caution in handling fire.</warning-disaster>
</warning-contents>
```

5.4.4.1 Warning Heading

Description :

The warning heading is described.

Notation Format :

```
<warning-heading>Heading</warning-heading>
```

Explanation :

The warning heading serves as a supplement to the content listed in the warning section.

Example :

```
<warning-heading>From now onward until afternoon there will be a snow storm in north
Ishikari, and the sea wind will be 28 m.</warning-heading>
```

5.4.4.2 Warning Cause

Description :

The cause section of the warning is described.

Notation Format :

```
<warning-cause>Cause, etc.</warning-cause>
```

Explanation :

The cause, etc. serves as a supplement to the content listed in the warning section.

Example :

```
<warning-cause>Air pressure will take on a winter pattern and strong cold air will
flow into the sky</warning-cause>
```

5.4.4.3 Area, Time Period, Current Condition

Description :

The portion of the warning indicating a change in content from the current condition is described.

Notation Format :

```
<warning-cond>Area, Time Period, Current Condition</warning-cond>
```

Explanation :

The area, time period, and current condition information serves as a supplement to the content listed in the warning section.

Example :

```
<warning-cond>In the north Ishikari region from now onward into afternoon snow will
fall with a west or
north west wind becoming extremely strong, and the sea will undergo a heavy
storm.</warning-cond>
```

5.4.4.4 Quantitative Warning

Description :

The quantitative forecast content portion of the warning is described.

Notation Format :

```
<warning-quant>quantity forecast </warning-quant>
```

Explanation :

The quantitative forecast information serves as a supplement to the content listed in the warning section.

Example :

```
<warning-quant>
```

```
In north Ishikari together with the gusts, the maximum land wind speed will be 13-18
m, and the maximum sea wind speed
will be 18-23 m. From now onward until night the amount of snowfall will generally be
5-10 cm, possibly reaching up to
about 15 cm in some places. </warning-quant>
```

5.4.4.5 Disaster Warning

Description :

The emergency prevention matters following warnings are described.

Notation Format :

```
<warning-disaster>Disaster Prevention Matters</warning-disaster>
```

Explanation :

Disaster prevention matters provide supplementary information for information presented in warnings.

Example :

```
<warning-disaster>
```

```
In the event of traffic obstacles, boat icing, and high waves due to snow storms or
snow drifts, warn ships and traffic strictly.
</warning-disaster>
```

5.4.4.6 Warning, Other

Description :

Information in warnings that was not expressed fully such as the title, cause, area, time period, current condition, quantity forecast, and disaster prevention matters are described.

Notation Format :

```
<warning-other>Note</warning-other>
```

Explanation :

Notes supplement information described in the warning classification.

Example :

```
<warning-other>
```

```
This is an update of the July 08, 16:30 caution.
</warning-other>
```

Road Web Markup Language (RWML)

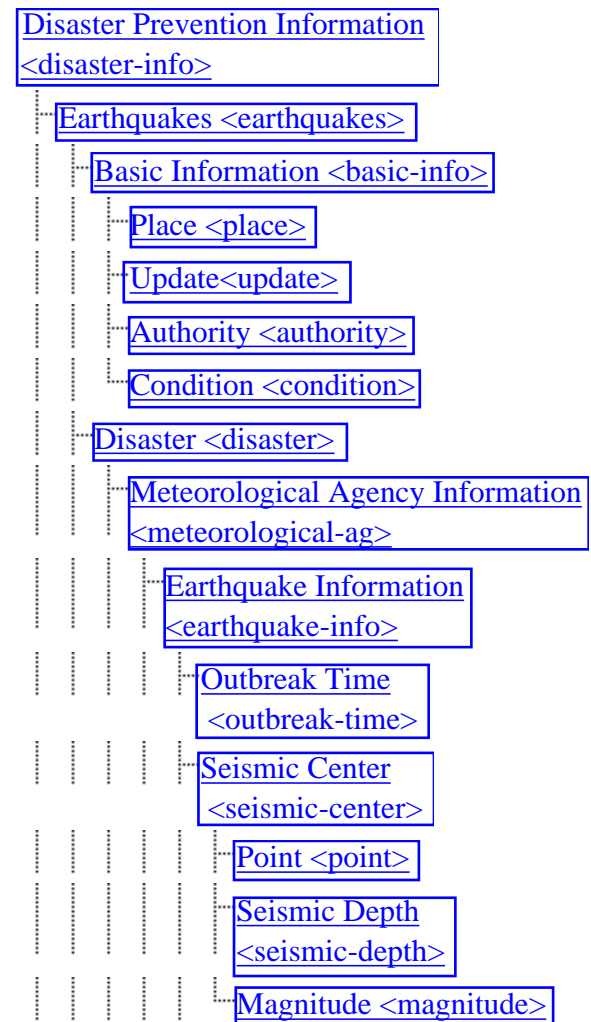
Specification Ver.0.80

RWML-WG Draft 2001-10-29

6. Disaster Prevention Information

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6. Disaster Prevention Information

6.1 Earthquakes

6.1.1 Basic Information

Description:

This section describes basic information pertaining to disaster prevention.

Explanation:

Each element that makes up basic information is described. Refer to [3. Basic Information Structure](#) for individual elements.

6.1.2 Disaster

Description:

This section gives information from the Meteorological Agency and the Road Management Official pertaining to disasters such as earthquakes, tsunamis, and road damage.

6.1.2.1 Meteorological Agency

Description:

This section lists information about earthquakes and tsunamis based on data from the Meteorological Agency.

6.1.2.1.1 Earthquake Information

Description:

This section describes the outbreak time, seismic center, seismic depth, magnitude, seismic intensity information by region, etc. that is given when earthquake information is announced.

6.1.2.1.1.1 Outbreak Time

Description:

[Tsunami <tsunami>](#)[Escape Map <escape-map>](#)[Point <point>](#)[Route <route>](#)[Zone <zone>](#)[Height <height>](#)[Tsunami Height](#)[<tsunami-height>](#)[Road Height <road-height>](#)[Relative Height](#)[<relative-height>](#)[Land / Rockslide](#)[<land-rockslide>](#)[Landslide <landslide>](#)[Rockslide <rockslide>](#)[Refuge Information <refuge-info>](#)[Refuge Center <refuge-place>](#)[Refuge Map <refuge-map>](#)[Name <name>](#)[Liaison <liaison>](#)[Accommodation](#)[<accommodation>](#)[Parking <parking>](#)[Store <store>](#)[Refuge Route <refuge-route>](#)[Route Map <route-map>](#)[Route <route>](#)[Communication Information](#)[<communication-info>](#)[Inter-Organization](#)[<inter-organization>](#)[Authority Name](#)[<authority-name>](#)[Liaison <liaison>](#)[In Organization <in-organization>](#)[Day Off <day-off>](#)[Staff Call <staff-call>](#)[Authority Name](#)[<authority-name>](#)

This section gives the earthquake outbreak time.

Notation Format:

`<outbreak-time>Outbreak Time</outbreak-time>`

Explanation:

Refer to the notation style in [2.2.1 Date and Time](#).

Example:

`<outbreak-time>1999-11-21T16:30+9:00</outbreak-time>`

`<outbreak-time>1999-11-23T17:30+9:00</outbreak-time>`

6.1.2.1.1.2 Seismic Center

Description:

This section describes the seismic center with point, seismic depth, and magnitude.

6.1.2.1.1.2.1 Point

Description:

This section describes the seismic center point with latitude and longitude.

Notation Format:

```
<point>
  <latitude>Latitude</latitude>
  <longitude>Longitude</longitude>
  <altitude>Altitude</altitude>
  <point-name>Point Name</point-name>
</point>
```

Explanation:

Refer to the notation style in [3.1.1 Point](#).

Example:

```
<point>
  <latitude>39,30,00</latitude>
  <longitude>139,15,00</longitude>
</point>
```

6.1.2.1.1.2.2 Seismic Depth

Description:

This section describes the seismic depth in km.

Explanation:

Follow the rules on seismic depth defined by Meteorological Agency.

Notation Format:

`<seismic-depth>Seismic Depth</seismic-depth>`

Example:

`<seismic-depth>20</seismic-depth>`

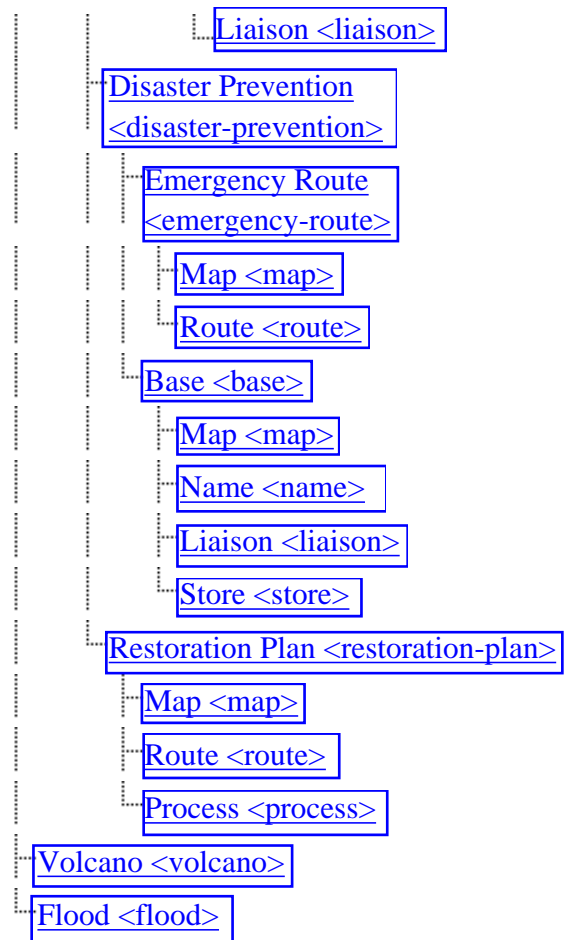


Figure 6.1: Disaster Prevention Information Tree Structure

6.1.2.1.1.2.3 Magnitude

Description:

This section expresses the seismic scale in magnitude.

Notation Format:

```
<magnitude>Magnitude</magnitude>
```

Explanation:

Follow the rules on magnitude defined by Meteorological Agency.

Example:

```
<magnitude>5.5</magnitude>
```

```
<magnitude>4.0</magnitude>
```

6.1.2.1.1.3 Seismic Intensity Information

Description:

This section describes seismic intensity information for each point.

6.1.2.1.1.3.1 Point

Description:

This section expresses seismic intensity information for each point in latitude, longitude, and point name.

Notation Format:

```
<point>
  <latitude>Latitude</latitude>
  <longitude>Longitude</longitude>
  <altitude>Altitude</altitude>
  <point-name>Point Name</point-name>
</point>
```

Explanation:

Refer to the notation style in [3.1.1 Point](#).

Example:

```
<point>
  <latitude>39,30,00</latitude>
  <longitude>139,15,00</longitude>
  <point-name>Kisakata Cho</point-name>
</point>
```

6.1.2.1.1.3.2 Seismic Intensity

Description:

This section expresses earthquake motion strength in a scale of intensity.

Notation Format:

```
<seismic-intensity>Seismic Intensity</seismic-intensity>
```

Explanation:

Describe seismic intensity in 10 gradations ranging from 0 to 7.

```
Seismic Intensity 0 : Measured seismic intensity 0.0-0.5
Seismic Intensity 1 : Measured seismic intensity 0.5-1.5
Seismic Intensity 2 : Measured seismic intensity 1.5-2.5
Seismic Intensity 3 : Measured seismic intensity 2.5-3.5
Seismic Intensity 4 : Measured seismic intensity 3.5-4.5
Seismic Intensity 5 : Measured seismic intensity 4.5-5.0
Seismic Intensity 5 : Measured seismic intensity 5.0-5.5
Seismic Intensity 6 : Measured seismic intensity 5.5-6.0
Seismic Intensity 7 : Measured seismic intensity 6.0-6.5
Seismic Intensity 7 : Measured seismic intensity 6.5-
```

Example:

```
<seismic-intensity>4</seismic-intensity>
```

6.1.2.1.2 Tsunami Forecast

Description:

This section describes the quantitative information about the forecasted tsunami given during a tsunami warning announcement.

There are three types of quantitative information:

```
"Information regarding the predicted arrival time and height of the tsunami"
"Information regarding the flood tide time and arrival time of the tsunami at each
point "
"Information regarding tsunami observation" (if required)
```

Notation Format:

```
<tsunami-forecast>Tsunami Forecast</tsunami-forecast>
```

Explanation:

Express the data in characters.

Example:

```
<tsunami-forecast>Information regarding the predicted arrival time and the
height of the tsunami</tsunami-forecast>
```

6.1.2.1.2.1 Warning Type

Description:

This section describes the tsunami warning. There are two types: "large tsunami warning" and "tsunami warning".

Notation Format:

```
<warning-type>Tsunami Type</warning-type>
```

Explanation:

Express the data in characters.

Example:

```
<warning-type>Large Tsunami Warning</warning-type>
<warning-type>Tsunami Warning</warning-type>
```

6.1.2.1.2.2 Caution Type

Description:

This section describes the tsunami caution. Only tsunami cautions are included.

Notation Format:

```
<st-warning>Tsunami Caution Type</st-warning>
```

Explanation:

Express data in characters.

Example:

```
<st-warning>Tsunami Caution </st-warning>
```

6.1.2.1.2.3 Forecast Area

Description:

This section describes the area announced in the tsunami forecast.

Notation Format:

```
<forecast-area>Forecast Area</forecast-area>
```

Explanation:

Hokkaido is divided in the following 6 blocks: Okhotsk Coastal Line, Hokkaido Pacific Ocean Coast (east section), Hokkaido Pacific Ocean Coast (central section), Hokkaido Pacific Ocean Coast (west section), Hokkaido Pacific Ocean Coast (north section), Hokkaido Pacific Ocean Coast (south section)

Example:

```
<forecast-area>Hokkaido Pacific Ocean Coast (east section)</forecast-area>
```

6.1.2.1.2.4 Sending Station

Description:

This section gives the tsunami warning and tsunami forecast sending station.

Notation Format:

```
<sending-station>Sending Station</sending-station>
```

Explanation:

Refer to the notation style in

Refer to the notation style in [3.3.1 Authority-Name](#).

Example:

```
<sending-station>
```

```
  <authority-name>
```

```
    <organization>Sapporo District Meteorological Observatory</organization>
```

```
  </authority-name>
```

```
</sending-station>
```

6.1.2.1.2.5 Announce Time

Description:

This section gives the tsunami warning / caution announcement time

Notation Format:

```
<announce-time>Announcement Year, Month, Date, Hour, Minute</announce-time>
```

Explanation:

Note the minute, hour, date, month, and year of the tsunami warning / caution. Refer to the notation style in [2.2.1 Date and Time](#).

Example:

```
<announce-time>1999-11-21T16:30+9:00</announce-time>
```

```
<announce-time>1999-11-23T17:30+9:00</announce-time>
```

6.1.2.1.2.6 Tsunami Arrival Time

Description:

This section gives the time that the tsunami is predicted to arrive.

Notation Format:

```
<tsunami-arrive-time>Tsunami Arrive Time</tsunami-arrive-time>
```

Explanation:

List the predicted tsunami arrival time in a "year/month/date/minute" format.

List the announcement time of the predicted tsunami arrival time in a "year/month/date/minute" format.

Refer to the notation style in [2.2.1 Date and Time](#).

Example:

```
<tsunami-arrive-time>1999-11-21T16:30+9:00</tsunami-arrive-time>
```

6.1.2.1.2.7 Tsunami Height

Description:

This section gives the tsunami's predicted height.

Notation Format:

```
<tsunami-height>Tsunami Height</tsunami-height>
```

Explanation:

Refer to the notation style in [3.1.1.3 Altitude](#).

Example:

```
<tsunami-height>
  <altitude>8.0</altitude>
</tsunami-height>
```

6.1.2.2 Road Authority

Description:

This section gives information pertaining to earthquakes and damaged roads based on information from road authorities.

6.1.2.2.1 Earthquake Information

Description:

This section gives earthquake information from road authorities.

6.1.2.2.1.1 Observation Point

Description:

This section gives the location in which a seismic meter is installed. Express using "point".

Notation Format:

```
<observe-point>
  <latitude>Latitude</latitude>
  <longitude>Longitude</longitude>
  <altitude>Altitude</altitude>
  <point-name>Point Name</point-name>
</observe-point>
```

Explanation:

Refer to the notation style in [3.1.1 Point](#).

Example:

```
<observe-point>
  <latitude>39,30,00</latitude>
  <longitude>139,15,00</longitude>
  <point-name>Akita Construction Office</point-name>
</observe-point>
```

6.1.2.2.1.2 Seismic Intensity

Description:

This section expresses the strength of the earthquake motion in a seismic scale.

Notation Format:

```
<seismic-intensity>seismic intensity</seismic-intensity>
```

Explanation:

Describe seismic intensity in 10 gradations ranging from 0 to 7.

```
Seismic Intensity 0 : Measured seismic intensity 0.0-0.5
Seismic Intensity 1 : Measured seismic intensity 0.5-1.5
Seismic Intensity 2 : Measured seismic intensity 1.5-2.5
Seismic Intensity 3 : Measured seismic intensity 2.5-3.5
Seismic Intensity 4 : Measured seismic intensity 3.5-4.5
Seismic Intensity 5 : Measured seismic intensity 4.5-5.0
Seismic Intensity 5 : Measured seismic intensity 5.0-5.5
Seismic Intensity 6 : Measured seismic intensity 5.5-6.0
Seismic Intensity 7 : Measured seismic intensity 6.0-6.5
Seismic Intensity 7 : Measured seismic intensity 6.5-
```

Example:

```
<seismic-intensity>5</seismic-intensity>
```

6.1.2.2.1.3 Spectral Intensity**Description:**

This section gives the span that an average building shakes due to an earthquake. Express using spectral intensity value (kine).

Notation Format:

```
<spectral-intensity>SI value</spectral-intensity>
```

Explanation:

Express the value in a sequence of numbers.

Example:

```
<spectral-intensity>30</spectral-intensity>
```

6.1.2.2.1.4 Accel Max**Description:**

This section records the extent of ground shaking measured on a seismograph and strong motion seismograph. Express in terms of earthquake movement acceleration. Record horizontal element and the vertical element data.

6.1.2.2.1.4.1 Accel Hmax**Description:**

This section records the horizontal element maximum acceleration (gal) at the point concerned.

Grasp the extent of ground shaking measured on a seismograph and strong motion seismograph as a numeric value of the earthquake movement acceleration. Express the earthquake movement strength.

Notation Format:

```
<accel-hmax dir="Direction">Maximum Acceleration </accel-hmax>
```

Explanation:

Express the value in a sequence of numbers.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
dir	NS, EW	#IMPLIED	Indicate north-south or east-west.

Example:

```
<accel-hmax dir="NS">50</accel-hmax>
```

6.1.2.2.1.4.2 Accel Vmax**Description:**

This section records the vertical element maximum acceleration (gal) at the point concerned.

Grasp the extent of ground shaking measured on a seismograph and strong motion seismograph as a numeric value of the earthquake movement acceleration. Express the earthquake movement strength.

Notation Format:

```
<accel-vmax>Maximum Acceleration </accel-vmax>
```

Explanation:

Express the value in a sequence of numbers.

Example:

```
<accel-vmax>30</accel-vmax>
```

6.1.2.2.1.5 Response Speed

Description:

This section describes response speed in cm/sec.

Notation Format:

```
<response-speed>Acceleration/Observation Response Value</response-speed>
```

Explanation:

Express the value in a sequence of numbers.

Example:

```
<response-speed>100</response-speed>
```

6.1.2.2.1.6 Check

Description:

This section describes the strong motion seismograph movement.

Notation Format:

```
<check>Acceleration/Strong Seismic Meter Movement</check>
```

Explanation:

Express the value in characters.

Example:

```
<check>Normal</check>
```

```
<check>Abnormal</check>
```

6.1.2.2.2 Road Suffering Information

Description:

This section records information on road damage from road authorities.

6.1.2.2.2.1 Suffering Point

Description:

This section expresses the location of the road damaged from tsunami activity in KP units.

Notation Format:

```
<suffer-point>Suffering Point</suffer-point>
```

Explanation:

Refer to the notation style in [3.1.2.4 Route Position](#).

Example:

```
<suffer-point>
  <route-position>14.2KP/14.5KP</route-position>
```

</suffer-point>

6.1.2.2.2 Suffering Scale

Description:

This section describes the scale of the road damage.

Notation Format:

<suffer-scale>*Suffering Scale*</suffer-scale>

Explanation:

Express in characters.

Example:

<suffer-scale>Flooded Road</suffer-scale>

<suffer-scale>Destruction to Main Road Body</suffer-scale>

6.1.2.2.3 Suffering Image

Description:

This section presents image(s) of the damaged location.

Notation Format:

<suffer-image href="URL">*Image Information*</suffer-image>

Explanation:

Specify the damage image file name. Refer to URL notation for the specification method.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Designate the image file name location.

Example:

<suffer-image href="http://www.bousaiserver.ne.jp/gazou/990612">99-06-12Damage Image</suffer-image>

6.1.3 Disaster Restore

Description:

This section gives information pertaining to hazard maps, refuge, management communication guidelines, disaster prevention measures, restoration plan, etc.

6.1.3.1 Hazard Map

Description:

This section reports information relating to hazard maps for tsunamis, etc.

6.1.3.1.1 Tsunami

Description:

This section gives tsunami hazard map information.

6.1.3.1.1.1 Escape Map**Description:**

This section presents the escape map which shows the road section where road flooding is predicted to occur during tsunami activity. Note road sections at an altitude lower than the assumed tsunami height.

Notation Format:

```
<escape-map href="URL">Escape Map</escape-map>
```

Explanation:

Designate the hazard map URL.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Designate the image file name location.

Example:

```
<escape-map href="http://www.bousaiserver.ne.jp/hazard-map/990612">99-06-12Hazard Map</escape-map>
```

6.1.3.1.1.2 Point**Description:**

This section expresses the point of possible tsunami activity.

Notation Format:

```
<point>
  <latitude>Latitude</latitude>
  <longitude>Longitude</longitude>
  <altitude>Altitude</altitude>
  <point-name>Point Name</point-name>
</point>
```

Explanation:

Refer to the notation style in [3.1.1 Point](#).

Example:

```
<point>
  <latitude>39,30,00</latitude>
  <longitude>139,15,00</longitude>
  <point-name>Kisakata Cho</point-name>
</point>
```

6.1.3.1.1.3 Route**Description:**

This section expresses the route of possible tsunami activity.

Notation Format:

```
<route>Rout</route>
```

Explanation:

Refer to the notation style in [3.1.2 Route](#).

Example:

```
<route>
  <route-name>National route 229</route-name>
</route>
```

6.1.3.1.1.4 Zone

Description:

This section expresses the zone of possible tsunami activity in *kilo post.

Notation Format:

```
<zone>Zone</zone>
```

Explanation:

Refer to the notation style in [3.1.2.4 Route Position](#).

Example:

```
<zone>
  <route-position>14.2KP/14.5KP</route-position>
</zone>
```

6.1.3.1.1.5 Height

Description:

This section indicates the road altitude, tsunami height, and the road overflow altitude in zones for which tsunami activity is possible.

6.1.3.1.1.5.1 Tsunami Height

Description:

This section gives the expected tsunami maximum altitude (TP+*xm*).

Notation Format:

```
<tsunami-height>Tsunami Height</tsunami-height>
```

Explanation:

Refer to the notation style in [3.1.1.3 Altitude](#).

Example:

```
<tsunami-height>
  <altitude>8.0</altitude>
</tsunami-height>
```

6.1.3.1.1.5.2 Road Height

Description:

This section indicates the vertical road height from the road ledger entry (TP+*xm*).

Notation Format:

```
<road-height>Road Height</road-height>
```

Explanation:

Refer to the notation style in [3.1.1.3 Altitude](#).

Example:

```
<road-height>
  <altitude>5.0</altitude>
</road-height>
```

6.1.3.1.1.5.3 Relative Height

Description:

This section indicates the height of tsunami overflow relative to the road surface.

(Tsunami Overflow Height (A)---Road Height (B) (TP+xm))

Notation Format:

```
<relative-height>Road Overflow Height</relative-height>
```

Explanation:

Refer to the notation style in [3.1.1.3 Altitude](#).

Example:

```
<relative-height>
  <altitude>3.0</altitude>
</relative-height>
```

6.1.3.1.2 Land / Rockslide Damage

6.1.3.1.2.1 Landslide

Description:

This section indicates the landslide disaster zone.

Notation Format:

```
<landslide>Landslide Damage Zone</landslide>
```

Explanation:

Refer to the notation style in [3.1.2.4 Route Position](#).

Example:

```
<!--Landslide Damage Zone-->
<landslide>
  <route-position>14.2KP/14.5KP</route-position>
</landslide>
```

6.1.3.1.2.2 Rockslide

Description:

This section indicates the rockslide damage zone.

Notation Format:

```
<rockslide>Rockslide Damage Zone</rockslide>
```

Explanation:

Refer to the notation style in [3.1.2.4 Route Position](#).

Example:

```
<!--Rockslide Damage Zone-->
<rockslide>
  <route-position>14.2KP/14.3KP</route-position>
</rockslide>
```

6.1.3.2 Refuge Information

Description:

This section gives information pertaining to refuge.

6.1.3.2.1 Refuge Center

Description:

This section gives information pertaining to emergency refuge centers.

6.1.3.2.1.1 Refuge Map

Description:

This section indicates the map containing emergency refuge centers.

Notation Format:

```
<refuge-map href="URL">Map </refuge-map>
```

Explanation:

Designate the URL of the map containing refuge centers.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Designate the location of the image file name.

Example:

```
<refuge-map href="http://www.bousaiserver.ne.jp/refuge-map/990612">99-06-12 refuge
Center Location Map</refuge-map>
```

6.1.3.2.1.2 Name

Description:

This section indicates the name(s) of building(s) designated as refuge center(s).

Notation Format:

```
<name>Name</name>
```

Explanation:

Express in characters.

Example:

```
<name>AA Center</name>
```

<name>BB School</name>

6.1.3.2.1.3 Liaison

Description:

This section gives the facility manager's contact information.

Notation Format:

```
<liaison>
  <contact-name>Name</contact-name>
  <zip-code>Zip-Code</zip-code>
  <address>Address</address>
  <contact-method>Contact Method</contact-method>
</liaison>
```

Explanation:

Refer to the common information rules in [3.3.2 Liaison](#).

Example:

```
<liaison>
  <contact-name>AA Center Emergency Drill Manager</contact-name>
</liaison>
```

6.1.3.2.1.4 Accommodation

Description:

This section indicates the refuge center accommodation capacity.

Notation Format:

```
<accommodation>Accommodation Capacity</accommodation>
```

Explanation:

Express in characters.

Example:

```
<accommodation>150</accommodation>
```

6.1.3.2.1.5 Parking

Description:

This section gives the refuge center parked vehicle capacity (in number of vehicles).

Notation Format:

```
<parking>Parking Capacity</parking>
```

Explanation:

Express in characters.

Example:

```
<parking>50</parking>
```

6.1.3.2.1.6 Store

Description:

This section lists the kind and amount of relief material stored in (an) refuge center(s).

Notation Format:

```
<store>Supply Stock</store>
```

Explanation:

Express in characters.

Example:

```
<store>Food Rations for 500 People</store>
```

```
<store>500 Liters of Drinking Water</store>
```

6.1.3.2.2 Refuge Route

This section marks the refuge route in layers on a map using a simple GIS.

6.1.3.2.2.1 Route Map

Description:

This section indicates the map containing the refuge route.

Notation Format:

```
<route-map href="URL">Map</route-map>
```

Explanation:

Specify the refuge route map URL.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	

Example:

```
<route-map href="http://www.bousaiserver.ne.jp/route-map/990612">99-06-12 refuge
Route Map</route-map>
```

6.1.3.2.2.2 Route

Description:

This section gives the refuge route name.

Notation Format:

```
<route>Route</route>
```

Explanation:

Refer to the notation style in [3.1.2 Route](#).

Example:

```
<route>
  <route-name>National Route 227</route-name>
</route>
```

6.1.3.3 Communication Information

Description:

This section describes cooperation and communication information, etc. between authorities.

6.1.3.3.1 Inter-Organization

Description:

This section presents a list containing all organizations that should cooperate when a tsunami warning is announced in a given place.

6.1.3.3.1.1 Authority Name

Description:

This section gives the name(s) of authority(ies) involved.

Notation Format:

```
<authority-name>
  <country>Country</country>
  <organization>Organization Name</organization>
  <section>Section Name</section>
  <title>Title</title>
</authority-name>
```

Explanation:

Refer to the common information rules in [3.3.1 Authority Name](#).

Example:

```
<authority-name>
  <organization>AA Town</organization>
</authority-name>
```

6.1.3.3.1.2 Liaison

Description:

This section describes the contact information for the authority of the appropriate facility.

Notation Format:

```
<liaison>
  <contactname>Contact Name</contactname>
  <zip-code>Zip Code</zip-code>
  <address>Address</address>
  <contact-method>Contact Method</contact-method>
</liaison>
```

Explanation:

Refer to the common information rules in [3.3.2 Liaison](#).

Example:

```
<liaison>
  <contact-name>AA Center Emergency Drill Manager </contact-name>
</liaison>
```

6.1.3.3.2 Inner-Organization

Description:

This section describes inner-organization communication links.

6.1.3.3.2.1 Day Off

Description:

This section presents a disaster correspondence manual describing communication methods for off duty hours.

Notation Format:

```
<day-off>Off Duty Hours Correspondence Manual</day-off>
```

Explanation:

Designate the off duty hours correspondence manual URL.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	

Example:

```
<day-off href="http://www.bousaiserver.ne.jp/day-off/990612">99-06-12 Off Duty Hours Correspondence Manual</day-off>
```

6.1.3.3.2.2 Staff Call

This section describes the staff alert system (pocket beeper, etc.) which brings the staff together during off-duty hours.

6.1.3.3.2.2.1 Authority Name

Description:

This section gives the name of the related organization's administrator.

Notation Format:

```
<authority-name>
  <country>Country</country>
  <organization>Organization Name</organization>
  <section>Section Name</section>
  <title>Titte</title>
</authority-name>
```

Explanation:

Refer to the common information rules in [3.3.1 Authority Name](#).

Example:

```
<authority-name>
  <organization>AA Town</organization>
</authority-name>
```

6.1.3.3.2.2.2 Liaison

Description:

This section describes the contact information for the related organization's administrator.

Notation Format:

```
<liaison>
  <contact-name>Contact Name</contact-name>
```

```
<zip-code>Zip Code</zip-code>
<address>Address</address>
<contact-method>Contact Method</contact-method>
</liaison>
```

Explanation:

Refer to the common information rules in [3.3.2 Liaison](#).

Example:

```
<liaison>
  <contact-name>AA Center Communication Receiver </contact-name>
</liaison>
```

6.1.3.4 Disaster Prevention

Description:

This section gives information pertaining to the emergency transportation road, detour, disaster prevention base, supplies, etc.

6.1.3.4.1 Emergency Route

6.1.3.4.1.1 Map

Description:

This section indicates the map containing the emergency route / detour.

Notation Format:

```
<map href="URL">Map</map>
```

Explanation:

Designate the urgent transportation road map URL.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Designate the image file name location.

Example:

```
<map href="http://www.bousaiserver.ne.jp/map/990612">99-06-12 Emergency Route /
Detour Map</map>
```

6.1.3.4.1.2 Route

Description:

This section gives the urgent transportation road / detour route name.

Notation Format:

```
<route>Route Name</route>
```

Explanation:

Refer to the notation style in [3.1.2 Route](#).

Example:

```
<route>
  <route-name>National Route 227</route-name>
```

</route>

6.1.3.4.2 Base

This section gives information pertaining to base(s) that store(s) road restoral materials or send(s) disaster information.

6.1.3.4.2.1 Map

Description:

This section indicates the map containing the disaster relief base location.

Notation Format:

```
<map href="URL">Disaster Relief Base Map</map>
```

Explanation:

Specify the URL of the disaster relief base map.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Specify the location of the image file name.

Example:

```
<map href="http://www.bousaiserver.ne.jp/base-map/990612">99-06-12 Disaster Relief Map </map>
```

6.1.3.4.2.2 Name

Description:

This section gives the name of the building designated as a disaster relief base.

Notation Format:

```
<name>Name</name>
```

Explanation:

Express in characters.

Example:

```
<name>AA Center</name>
```

```
<name>BB School</name>
```

6.1.3.4.2.3 Liaison

Description:

This section describes the contact information for the authority of the facility.

Notation Format:

```
<liaison>
  <contact-name>Contact Name</contact-name>
  <zip-code>Zip Code</zip-code>
  <address>Address</address>
  <contact-method>Contact Method</contact-method>
</liaison>
```

Explanation:

Refer to the common information rules in [3.3.2 Liaison](#).

Example:

```
<liaison>
  <contact-name>AA Center, Disaster Relief Manager</contact-name>
</liaison>
```

6.1.3.4.2.4 Store

Description:

This section lists the kind and amount of relief material stored in (an) refuge center(s).

Notation Format:

```
<store>Supply Stock</store>
```

Explanation:

Express in characters.

Example:

```
<store>Restoration Materials</store>
```

```
<store>Heavy Machinery</store>
```

6.1.3.5 Restoration Plan

Description:

This section is a restoration plan chart that describes the restoration process clearly.

6.1.3.5.1 Map

Description:

This section indicates the map which displays completed vs. non-completed areas.

Notation Format:

```
<map href="URL">Complete/Incomplete Area Map</map>
```

Explanation:

Specify the URL for the map which displays completed vs. non-completed areas.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Specify the image file name location.

Example:

```
<map href="http://www.bousaiserver.ne.jp/restore-map/990612">99-06-12
Complete/Incomplete Area Map</map>
```

6.1.3.5.2 Route

Description:

This section indicates the restoration route (complete vs. incomplete areas).

Notation Format:

```
<route>Route</route>
```

Explanation:

Refer to the notation style in [3.1.2 Route](#).

Example:

```
<route>
  <route-name>National Route 227</route-name>
  <route°position>38.0kp/38.5kp</route-position>
</route>
```

6.1.3.5.3 Process

Description:

This section indicates the map that shows restoration process.

Notation Format:

```
<process href="URL">Restoration Process</process>
```

Explanation:

Specify the URL of the restoration process.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Specify the image file name location.

Example:

```
<process href="http://www.bousaiserver.ne.jp/process/990612">99-06-12 Restoration Process</process>
```

6.2 Volcano

Information pertaining to volcanoes. (Under Construction)

6.3 Flood

Information on floods. (Under Construction)

Road Web Markup Language (RWML)

Specification Ver.0.80

RWML-WG Draft 2001-10-29

7. Regional Information

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7 Regional Information

Description:

Regional information includes things like regional events, sights, recreation, and store information. Sightseeing information that does not effect the route choice directly, but can serve as a reference for a comfortable drive, is described.

7.1 Basic Information

Description:

This section indicates basic information pertaining to regional information.

Explanation:

This section lists the elements that make up basic information. Base individual elements on [3. Basic Information Structure](#).

7.2 Country-Message

Description:

This section gives messages from each region (country-message).

7.2.1 Place

Description:

This section indicates location information pertaining to the country message.

Explanation:

This section lists the elements that make up the location information. Base individual elements on [3.1 Place](#).

7.2.2 Message

Description:

This section gives the country message.

Notation Format:

```
<message>Message</message>
```

Explanation:

This is described in characters.

Example:

```
<message>
At XX town YY event will take place today.</message>
```

7.2.3 Website

Description:

URLs for sites pertaining to the country message are given. Supplemental explanations regarding sites are described in characters.

Notation Format:

```
<website href="URL">Page Explanation </website>
```

or,

```
<website href="URL" />
```

Explanation:

The URL for the page is indicated in Attribute href.

Supplemental explanation is described in characters in the element content.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
href	CDATA	#REQUIRED	Specify the web site URL.

Example :

```
<website href="http://www.server.domain/index.html">
YY event official website
</website>
```

7.3 Event-Info

Description:

This section contains event information.

7.3.1 Place

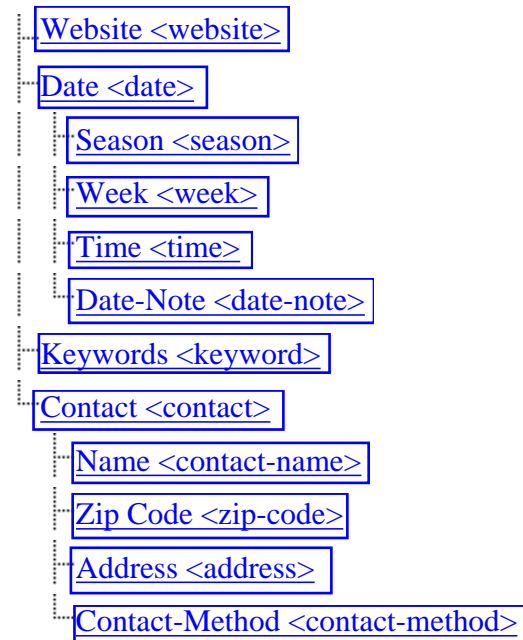


Figure 7.1: Regional info tree structure

Description:

This section contains information pertaining to event location.

Explanation:

This section lists the elements that make up location information. Base individual elements on [3.1 Place](#).

7.3.2 Name**Description:**

This section indicates the event name.

Notation Format:

```
<name>Name</name>
```

Explanation:

This is described in characters.

Explanation

```
<name>The 50th XX Festival </name>
```

7.3.3 Outline**Description:**

This section indicates the event outline.

Notation Format:

```
<outline>Outline</outline>
```

Explanation:

This is described in characters. The characters can include linefeed code. If the outline is in Japanese, the number of characters is approximately 50.

Explanation

```
<outline>
```

```
The 50th XX Festival is held for one week starting February 5. During the festival,
various kinds of events are planed.
```

```
</outline>
```

7.3.4 Detail**Description:**

This section indicates the detailed explanation of event.

Notation Format:

```
<detail>Details</detail>
```

Explanation:

This is described in characters. The characters can include linefeed code. If the outline is in Japanese, the number of characters is 300-400.

Example:

```
<detail>
```

The XX Festival 50th anniversary celebration will be held for one week starting on February 5 of this year.

The three gathering spots will be the same as every year: XX, YY, ZZZ

A fireworks display is planned for the XX venue on February 6 (Sat), 7 (Sun), and 11 (Thurs)

</detail>

7.3.5 Image

Description:

The image URL pertaining to the event is given. The image headings are described in characters.

Notation Format:

```
<image src="URL">Image Title</image>
```

or,

```
<image src="URL" />
```

Explanation:

The image URL is described in Attribute src.

The title is described in characters in the element content.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation
src	CDATA	#REQUIRED	Specify the image URL.

Example

```
<image src="event.jpg">Image</image>
```

or,

```
<image src="http://www.server.domain/directory/event.jpg" />
```

7.3.6 Website

Description:

The URL for a site pertaining to event is described. Supplemental explanations regarding the site are described in the characters.

Notation Format:

```
<website href="URL">website explanation</website>
```

or,

```
<website href="URL" />
```

Explanation:

The page URL is described in Attribute href.

The title is described in characters in the element content.

Attributes:

Attribute Name	Attribute Value	Value Upon Omission	Explanation:
href	CDATA	#REQUIRED	Specify the web site URL.

Example:

```
<website href="http://www.server.domain/index.html">
```

```
YY Festival official website
```

</website>

7.3.7 Date

Description:

This section indicates the duration of the event.

Explanation:

If date and time are not specified, it is assumed to be active 24 hours everyday.

By listing elements consecutively, complex time periods such as different event times on weekdays and weekends can be expressed.

7.3.7.1 Season

Description:

This section indicates the event date.

Notation Format:

```
<season>event day</season>
<season>first day/last day</season>
<season>first day</season>
<season>/last day</season>
```

Explanation:

The event period information is written in characters like this: 2001-07-07/2001-07-09 (commencement year month day/ completion year month day)

When there is no designation, the event is assumed to occur everyday.

Example:

```
<schedule>2001-07-07</schedule>
<!-- July 7, 2001 -->
or,
<schedule>2001-07-07/2001-07-09</schedule>
<!-- July 7 to 9, 2001-->
or,
<schedule>2001-07-07/</schedule>
<!-- from July 7, 2001 -->
or,
<schedule>/2001-07-09</schedule>
<!-- until July 9, 2001 -->
```

7.3.7.2 Week

Description:

This section indicates the days of the week that the event will be held.

Notation Format:

```
<week>weekday</week>
```

Explanation:

The information is expressed in characters like the following: Mon. Tues. Wed. Thurs. Fri. Sat.

When there is no designation, the event is assumed to occur everyday.

Expression methods that logically follow the style in [7.3.7.1 Season](#) are used. In other words, "

`<season>2001-07-01/2001/07-31</season> <week>Sun. Sat.</week>` ," would express Saturday & Sunday of July 2001.

Example

```
<week>Mon. Wed. Fri.</week>
```

7.3.7.3 Time

Description:

This section indicates the event time.

Notation Format:

```
<time>commencement time/completion time</time>
```

Explanation:

The event time is indicated in characters like the following: 12:00/18:00 (commencement time/completion time).

When there is no designation, the event is assumed to occur 24 hours a day.

Example:

```
<time>00:00/21:00</time>
```

7.3.7.4 Date-Note

Description:

This section gives explanations related to the event duration.

Notation Format:

```
<time>date-note</time>
```

Explanation:

This is described in characters.

Example:

```
<date-note>
completion time is subject to slight alteration
</date-note>
```

7.3.8 Keywords

Description:

This section indicates event key words.

Notation Format:

```
<keyword>Keywords</keyword>
```

Explanation:

Keywords are listed.

If the more than one keyword is listed, the individual elements are listed more than once.

Standard keywords are listed below.

agriculture, fishing industry, regional industries, free market, hot springs, outdoor, sports, flower/tree, music, art, food culture, family, child, adults, male, female

Example:

<keyword>Outdoor</keyword>

7.3.9 Contact

Description:

This section indicates the event contact information.

7.3.9.1 Contact-Name

Description:

This section indicates the contact name.

Notation Format:

Notation Format corresponds with the format in [3.3.2.1 Contact Name](#).

7.3.9.2 Zip Code

Description:

This section indicates the contact zip code.

Notation Format:

Notation Format corresponds with the format in [3.3.2.2 Zip Code](#)

7.3.9.3 Address

Description:

This section indicates the contact address.

Notation Format:

Notation Format corresponds with the format in [3.3.2.3 Address](#)

7.3.9.4 Contact-Method

Description:

This section indicates the method of contact.

Notation Format:

Notation Format corresponds with the format in [3.3.2.4 Contact-Method](#)

7.4 Tourist-Info

Description:

This section indicates tourist information.

Attribute:

Attribute Name	Attribute Value	Value Upon Omission	Explanation

category	CDATA	#REQUIRED	Tourist information type is indicated. Character strings like the ones below are entered. hotspring, food, nature, experience, culture, industry
----------	-------	-----------	--

7.4.1 Place

Description:

This section indicates the location information related to the tourist information.

Explanation:

The various elements which make up location information are listed. Individual elements follow the standards set in [3.1 Place](#).

7.4.2 Name

Description:

This section indicates the tourist information name.

Notation Format:

Notation Format corresponds with the format in [7.3.2 Name](#)

7.4.3 Outline

Description:

This section gives the tourist information outline.

Notation Format:

Notation Format corresponds with the format in [7.3.3 Outline](#).

7.4.4 Detail

Description:

This section indicates the tourist information detailed explanatory text.

Notation Format:

Notation Format corresponds with the format in [7.3.4 Detail](#).

7.4.5 Image

Description:

This section indicates URLs for images related to tourist information The image title is expressed in characters.

Notation Format:

Notation Format corresponds with the format in [7.3.5 Image](#).

7.4.6 Website

Description:

This section indicates the URLs for sites related to tourist information. The supplemental explanation related to the site is expressed in characters.

Notation Format:

Notation Format corresponds with the format in [7.3.6 Website](#).

7.4.7 Date

Description:

This section gives the valid time period for tourist information.

Explanation:

Individual elements follow the standards set in [7.3.7 Date](#).

7.4.8 Keyword

Description:

This section indicates the tourist information key words.

Notation Format:

Notation Format corresponds with the format in [7.3.8 Keyword](#)

7.4.9 Contact

Description:

This section indicates the tourist information contact.

Individual elements follow the standards set in [7.3.9 Contact](#).

7.4.10 Facilities

Description:

This section indicates information related to facilities, etc.

7.4.10.1 Parking-Num

Description:

This section indicates the vehicle number for vehicles allowed to park.

Notation Format:

```
<parking-num type="Vehicle Type">Parking Vehicle Number</parking-num>
```

Explanation:

The vehicle type is recorded for attribute type

Within the element contents, parking clearance vehicle numbers are expressed in numerals.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
type	CDATA	#REQUIRED	Vehicle type is expressed in the following character strings. large vehicle, regular vehicle, special vehicle

Example :

```
<parking-num type="large vehicle">5</parking-num>
<parking-num type="regular vehicle">20</parking-num>
```

7.4.10.2 Toilet-Num

Description:

This section indicates the toilet number.

Notation Format:

```
<toilet-num type="Toilet type">number</toilet-num>
```

Explanation:

The type is recorded in the attribute type.

Within the element contents, the toilet number is expressed in numerals.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
type	CDATA	#REQUIRED	Toilet type is expressed in the following character strings. Handicapped Toilet, Nursing Mother's Room, Men's Toilet, Women's Toilet

Example :

```
<toilet-num type="Men's Toilet">10</toilet-num>
<toilet-num type="Women's Toilet">5</toilet-num>
<toilet-num type="Handicapped Toilet">1</toilet-num>
```

7.4.10.3 Others-Num

Description:

This section indicates other facilities.

Notation Format:

```
<others-num type="Facility Type">number</others-num>
```

Explanation:

The facility type is recorded for the attribute type.

Within the element contents, the facility number is expressed in numerals.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
type	CDATA	#REQUIRED	The facility type is recorded in character stings like "public phone" or "fax".

Example :

```
<others-num type="public phone">1</others-num>
```

7.5 Scenic

Description:

This section indicates scenic information.

Attribute :

Attribute Name	Attribute Value	Value Upon Omission	Explanation
category	CDATA	#REQUIRED	Tourist information type is indicated. Character strings are entered like the following: hotspring, food, nature, experience, culture, industry

7.5.1 Place

Description:

This section indicates the location information related to the scenic information.

Explanation:

Individual elements which make up the location information are listed. Individual elements follow the standards set in [3.1 Place](#)

7.5.2 Object

Description:

This section indicates the scenic information film target name.

Notation Format:

`<name>Name</name>`

Explanation:

This is described in characters.

Example :

`<name>Coast XX</name>`

7.5.3 Outline

Description:

This section indicates the scenic information outline.

Notation Format:

Notation Format corresponds with the format in [7.3.3 Outline](#).

7.5.4 Detail

Description:

This section indicates detailed explanations related to scenic information.

Notation Format:

Notation Format corresponds with the format in [7.3.4 Explanation](#).

7.5.5 Image

Description:

This section indicates the image URL pertaining to the scenic information. The image headings are described in characters.

Notation Format:

Notation Format corresponds with the format in [7.3.5 Image](#).

7.5.6 Website

Description:

This section indicates URLs for sites related to scenic information. Supplemental explanations related to the site are expressed in characters

Notation Format:

Notation Format corresponds with the format in [7.3.6 Website](#).

7.5.7 Date

Description:

This section indicates the valid time period for scenic information.

Explanation:

Individual elements follow the standards set in [7.3.7 Date](#).

7.5.8 Keyword

Description:

This section indicates the scenic information keyword.

Notation Format:

Notation Format corresponds with the format in [7.3.8 Keyword](#).

7.5.9 Contact

Description:

This section indicates the scenic information contact.

Individual elements follow the standards set in [7.3.9 Contact](#).

Road Web Markup Language (RWML)

Specification Ver.0.80

RWML-WG Draft 2001-10-29

Appendix A. Document Type Definition

```
<?xml version="1.0" encoding="Shift_JIS" ?>
```

```
<!--*****-->
<!--*
                Copyright Notice                *-->
<!--*
                Copyright (C) RWML Working Group    *-->
<!--*   Hokkaido Development Bureau, Civil Engineering Research Institute   *-->
<!--*           is the representative of RWML Working Group.           *-->
<!--*****-->
```

```
<!--*****-->
<!--*
                Road Web Markup Language (RWML)   DTD                *-->
<!--*****-->
```

```
<!--*****-->
<!--*
                Revision Record                *-->
<!--*
                +=====+                *-->
<!--*   |Ver.0.70| 31, August, 1999 | Updated | *-->
<!--*   |Ver.0.71| 20, October, 1999 | Updated | *-->
<!--*   |Ver.0.80| 14, June, 2001 | Updated | *-->
<!--*
                +=====+                *-->
<!--*****-->
```

```
<!--*****-->
<!--*
                Whole Structure (Chapter 1. Structure)                *-->
<!--*****-->
```

```

<!ELEMENT RWML                (road-info*,weather-info*,disaster-info*,
regional-info*) >
<!ATTLIST RWML                version    CDATA        #REQUIRED >

<!-- The root element of RWML data
      4. Road Information
      5. Weather Information
      6. Disaster Information
      7. Regional Information
-->

<!--*****-->
<!--* Basic Information(Chapter3.The Structure of Common Basic Information) *-->
<!--*****-->

<!ELEMENT basic-info          (place,update,authority,condition) >

<!-- 3. Basic Information      RELATED CLAUSES: 4.1, 5.1, 6.1.1, 7.1      -->

<!ELEMENT place                (point|route|area)+ >
-->
<!-- 3.1 Place                NOTATION: refer to notation of clause 2.1      -->

<!ELEMENT point                (latitude?,longitude?,altitude?,point-name*,
address?,access?) >

<!-- 3.1.1 Point              RELATED CLAUSES: 6.1.2.1.1.2.1, 6.1.2.1.1.3.1,
                                6.1.3.1.1.2, 6.1.3.1.1.2      -->

<!ELEMENT latitude             (#PCDATA) >

<!-- 3.1.1.1 Latitude          NOTATION:* degree or combination of degree,
                                minute and second
                                * degree,minute and second are
                                separated by comma
                                * "+" sign is omissible
                                CONSTRAINT:* maximum precision is E-6
                                * the range is from -90.000000 to
                                +90.000000      -->

<!ELEMENT longitude            (#PCDATA) >

<!-- 3.1.1.2 Longitude          NOTATION:* degree or combination of degree,
                                minute and second
                                * degree,minute and second are
                                separated by comma
                                * "+" sign is omissible
                                CONSTRAINT:* maximum precision is E-6
                                * the range is from -180.000000 to
                                +180.000000      -->

<!ELEMENT altitude             (#PCDATA) >

<!-- 3.1.1.3 Altitude          NOTATION: meter
                                CONSTRAINT: maximum precision is E-2      -->

```

```

<!ELEMENT point-name          (#PCDATA) >
<!ATTLIST point-name         name-type   (formal|alias|popular)   #IMPLIED >

<!-- 3.1.1.4 Point Name      NOTATION: characters
                             ATTRIBUTE: namy-type = kind of point name
                                           * formal name ("formal")
                                           * alias name ("alias")
                                           * popular name ("popular")
                             -->

<!ELEMENT access              (access-note?,access-map?) >

<!ELEMENT access-note        (#PCDATA) >

<!ELEMENT access-map         (#PCDATA) >
<!ATTLIST access-map         src          CDATA          #REQUIRED >

<!ELEMENT route               (route-name+,road-class?,toll?,route-position?)>

<!-- 3.1.2 Route             EXPLANATION: route information
                             RELATED CLAUSES: 6.1.3.1.1.3, 6.1.3.2.2.2,
                                           6.1.3.4.1.2, 6.1.3.5.2,
                                           6.1.3.1.1.3•A6.1.3.2.2.2   -->

<!ELEMENT route-name         (#PCDATA) >
<!ATTLIST route-name         name-type   (formal|alias|popular)   #IMPLIED >

<!-- 3.1.2.1 Route Name     NOTATION: characters
                             ATTRIBUTE: namy-type = kind of point name
                                           formal name ("formal")
                                           alias name ("alias")
                                           popular name ("popular")
                             -->

<!ELEMENT road-class          (#PCDATA) >

<!-- 3.1.2.2 Road Class     NOTATION:* characters
                             * with pay or free
                             CLASSIFICATION: superhighway, driveway,
                                           national highway, prefectural road, municipal
                                           road, others (path between fields, path
                                           through a forest, private road )
                             -->

<!ELEMENT toll                (#PCDATA) >
-->

<!-- 3.1.2.3 Toll Classification
                             NOTATION: characters
                             -->

<!ELEMENT route-position     (#PCDATA) >

<!-- 3.1.2.4 Route Position NOTATION:* characters
                             * route positions are separated by
                             slash "/"
                             -->

```

```

<!ELEMENT area                                (area-name+,region-code?,mesh-code?) >

<!-- 3.1.3 Area                                -->

<!ELEMENT area-name                          (#PCDATA) >
<!ATTLIST area-name                          name-type    (formal|alias|popular)    #IMPLIED >

<!-- 3.1.3.1 Area Name                        NOTATION: characters
ATTRIBUTE: name-type = kind of point name
* formal name ("formal")
* alias name ("alias")
* popular name ("popular")
-->

<!ELEMENT region-code                        (#PCDATA) >

<!-- 3.1.3.2 Region Code                      NOTATION:* number in 5 figures
* combination of a 2-digit number of
JIS X 0401 (prefectural code) and a
3-digit number of JIS X 0402 (region
code)
-->

<!ELEMENT mesh-code                          (#PCDATA) >
<!ATTLIST mesh-code                          std          CDATA          #REQUIRED
comment      CDATA          #IMPLIED >

<!-- 3.1.3.3 Local Mesh Code                 NOTATION:* number
* value of JIS X 0410(prefectural code)
ATTRIBUTE:* std = name of standard
JIS X0410)
* comment = comment
RELATED CLAUSES: 5.2.2.2.1, 5.3.2.2.1
-->

<!ELEMENT update                             (last-update,next-update?,update-period?) >
<!-- 3.2 Update                             EXPLANATION: refer to definition of clause 2.2
-->

<!ELEMENT last-update                        (#PCDATA) >
<!-- 3.2.1 Last Update Time                 NOTATION: characters
-->

<!ELEMENT next-update                        (#PCDATA) >
<!-- 3.2.2 Next Update                     NOTATION: characters
-->

<!ELEMENT update-period                      (start-time?,end-time?,period?) >

<!-- 3.2.3 Update Period                    EXPLANATION: period and cycle to update
-->

<!ELEMENT start-time                         (#PCDATA) >
<!-- 3.2.3.1 Start Time                   NOTATION: characters
-->

<!ELEMENT end-time                          (#PCDATA) >
<!-- 3.2.3.2 End Time                     NOTATION: characters
-->

<!ELEMENT period                            (#PCDATA) >
<!ATTLIST period                            unit          CDATA          "hour" >

```

```

<!-- 3.2.3.3 Interval          NOTATION: characters
                                ATTRIBUTE: unit = unit of interval      -->

<!ELEMENT authority           (authority-name+,liaison+) >

<!-- 3.3 Authority                                                    -->

<!ELEMENT authority-name      (country?,organization,section?,title?,
                                administrator-name?) >
<!-- 3.3.1 Authority Name      RELATED CLAUSES: 6.1.3.3.1.1, 6.1.3.3.2.2.1  -->

<!ELEMENT country             (#PCDATA) >

<!-- 3.3.1.1 Country          NOTATION:* refer to notation of clause 2.1.3.1
                                * 2 characters
                                * refer to JIS X 0304 (country code)    -->

<!ELEMENT organization        (#PCDATA) >

<!-- 3.3.1.2 Country          NOTATION:* characters
                                * refer to clause 2.3                      -->

<!ELEMENT section             (#PCDATA) >

<!-- 3.3.1.3 Section          NOTATION:* characters
                                * each organization level is separated
                                by comma                                     -->

<!ELEMENT title               (#PCDATA) >

<!-- 3.3.1.4 Title            NOTATION: refer to notation of clause 2.4.2  -->

<!ELEMENT administrator-name  (#PCDATA) >
<!ATTLIST administrator-name  name-type   (formal|alias|popular)   #IMPLIED >

<!-- 3.3.1.5 Administrator name NOTATION: refer to notation of clause 2.4.1
                                ATTRIBUTE: name-type = kind of name
                                * formal name ("formal")
                                * alias name ("alias")
                                * popular name ("popular") -->

<!ELEMENT liaison            (contact-name,zip-code?,address?,
                                contact-method*) >
<!-- 3.3.2 Liaison            RELATED CLAUSES: 6.1.3.2.1.3, 6.1.3.3.1.2,
                                6.1.3.3.2.2.2, 6.1.3.4.2.3,
                                6.1.3.3.1.2, 6.1.3.3.2.2.2 -->

<!ELEMENT contact-name        (#PCDATA) >

<!-- 3.3.2.1 Contact Name     NOTATION: characters                        -->

<!ELEMENT zip-code            (#PCDATA) >

<!-- 3.3.2.2 Postal Code Number

```

```

NOTATION: refer to notation of clause 2.5.1 -->

<!ELEMENT address                (#PCDATA) >

<!-- 3.3.2.3 Address              NOTATION: refer to notation of clause 2.5.2 -->

<!ELEMENT contact-method         (#PCDATA) >
<!ATTLIST contact-method        href          CDATA          #REQUIRED >
<!-- 3.3.2.4 Contact Method      NOTATION: refer to notation of clause 2.5.3
ATTRIBUTE: * href = how to contact
            * available characters are number,
            plus"+", hyphen"-", right
            parenthesis")", left parenthesis"(",
            space" "
            * tel:, fax:, mailto:, http:// -->

<!ELEMENT condition              (condition-type?,permission?,limitation?,note?)>
<!-- 3.4 Condition -->

<!ELEMENT condition-type         (#PCDATA) >
<!-- 3.4.1 Condition Type       NOTATION: one of the followings. "test" (test
                                supply), "free" (free supply), "pay"
                                (pay supply), "other" (other) -->

<!ELEMENT permission             (#PCDATA) >
<!-- 3.4.2 Permission          NOTATION: one of the followings.
                                "none" (unnecessary), "notice" (notice is
                                necessary), "contract" (contract is necessary),
                                "other" (other) -->

<!ELEMENT limitation             (#PCDATA) >

<!-- 3.4.3 Limitation Clause    NOTATION: one of the followings.
                                "escape" (escape),"other2 (other) -->

<!ELEMENT note                   (#PCDATA) >

<!-- 3.4.4 Notice              NOTATION: characters -->

<!--*****-->
<!--*          Road Information (Chapter 4. Road Information)          *-->
<!--*****-->

<!ELEMENT road-info              (basic-info?,road-weather*,road-surface*,
camera-image*,congestion*,regulation*,traffic-flow*,travel-time*,
specific-place*) >

<!-- 4 Road Information -->

<!ELEMENT road-weather           (observe-place,observe-time,weather?,
temperature?,humidity?,wind-direction?,wind-speed?,visibility?,precipitation?
,snow-depth?,snow-fall?) >

<!-- 4.2 Road Weather -->

<!ELEMENT observe-place          (observe-point?,observe-route?) >

```

```

<!-- 4.2.1 Observe Place          RELATED CLAUSES: 4.3.1, 4.4.1, 4.5.1, 4.7.1 -->
<!ELEMENT observe-point          (latitude,longitude,altitude?,point-name?,
observe-code?) >
<!-- 4.2.1.1 Observe Point       NOTATION: refer to clause 3.1.1
RELATED CLAUSES: 6.1.2.2.1.1    -->

<!ELEMENT observe-code           (#PCDATA) >
<!ATTLIST observe-code          system      CDATA      #REQUIRED >

<!--                               NOTATION: refer to clause 4.2.1.1
ATTRIBUTE: system = observation system -->

<!ELEMENT observe-route          (route-name,route-position,observe-code?) >

<!-- 4.2.1.2 Observation Route    -->

<!ELEMENT observe-time           (#PCDATA) >

<!-- 4.2.2 Observation Time       NOTATION: characters
RELATED CLAUSES: 4.3.2, 4.4.2, 4.5.2, 4.7.2,
4.8.1, 5.2.5                    -->

<!ELEMENT weather                (#PCDATA) >
<!ATTLIST weather               type        (code|text)      "text" >
<!-- 4.2.3 Weather              NOTATION: * characters
* refer to clause 4.2.3 in the
specification
ATTRIBUTE: type = code ("code") or
character ("text")
RELATED CLAUSES: 5.2.6.2.5      -->

<!ELEMENT temperature           (#PCDATA) >
<!ATTLIST temperature           time1     CDATA      #IMPLIED
time2     CDATA      #IMPLIED
unit      (Celsius|Fahrenheit) "Celsius" >

<!-- 4.2.4 Temperature          NOTATION: centigrade number to the first decimal
place. can omit decimals
ATTRIBUTE: * time1 = forecast time (used at
clause 5.3.6.2.5)
* time2 = forecast time zone (used at
clause 5.3.6.2.5)
* unit = unit (Celsius or Fahrenheit.
used in clause 5.2.6.2.6,
5.3.6.2.5, 5.3.6.2.13.3,
5.3.6.2.14.3)
RELATED CLAUSES: 5.2.6.2.6, 5.3.6.2.5,
5.3.6.2.13.3, 5.3.6.2.14.3 -->

<!ELEMENT humidity              (#PCDATA) >
<!-- 4.2.5 Humidity            NOTATION: percentage to the first digit.
relative humidity                -->

<!ELEMENT wind-direction        (#PCDATA) >
<!ATTLIST wind-direction        direc     (16|08)      "16"
windc      (average|max)      "average"

```

```

time1      CDATA      #IMPLIED
time2      CDATA      #IMPLIED
code       (num|alpha) "alpha" >
<!-- 4.2.6 Wind Direction
NOTATION: number or English letter. refer to
          clause 4.3.6 in the specification
ATTRIBUTE: * direc = division of direction
            * 16: 16 division
            * 08: 8 division
            (used in clause 5.3.6.2.10)
            * windc = "average" (used in clause
            5.3.6.2.10)
            * time1 = forecast time (used at
            clause 5.3.6.2.10)
            * time2 = forecast time zone (used at
            clause 5.3.6.2.10)
            * code = numeric code ("num") or
            alphabetical code ("alpha")
            (used in clause 4.2.6,
            5.2.6.2.9, 5.3.6.2.10)
RELATED CLAUSES: 5.2.6.2.9, 5.3.6.2.10      -->

<!ELEMENT wind-speed      (#PCDATA) >
<!ATTLIST wind-speed
time1      CDATA      #IMPLIED
time2      CDATA      #IMPLIED
unit       CDATA      #IMPLIED
windc      (average|max) "average" >
<!-- 4.2.7 Wind Speed
NOTATION: number in m/s to the first digit. If
          0.2m/s or less, 0m/s
ATTRIBUTE: * time1 = forecast time (used at
            clause 5.3.6.2.11)
            * time2 = forecast time zone (used
            in clause 5.3.6.2.11)
            * unit = unit (used in clause
            5.2.6.2.10, 5.3.6.2.11)
            * windc = average("average") or
            max ("max") (used in clause
            5.3.6.2.11)
RELATED CLAUSES: 5.2.6.2.10, 5.3.6.2.11      -->

<!ELEMENT visibility      (#PCDATA) >
<!-- 4.2.8 Visibility
NOTATION: number in meter to the third digit. If
          more than 1000m, "good"      -->

<!ELEMENT precipitation    (#PCDATA) >
<!ATTLIST precipitation
measure    (auto|manual) "auto"
time1      CDATA      #IMPLIED
time2      CDATA      #IMPLIED
unit       CDATA      #IMPLIED
span       (hourly|pre03|pre06|pre12|pre24|daily)
           "hourly" >
<!-- 4.2.9 Precipitation
NOTATION: number in mm to the first digit. If
          less than 0.5, 0. If from 0.5 to 1.0(
          exclusive of 1.0), 0.5. If it is not
          possible to get any observation data,
          "nodata".
ATTRIBUTE: * measure = rain gauge
            observation ("auto") or watch

```

```

        observation ("manual")
        (used in clause 5.2.6.2.11)
    * time1 = forecast time
    * time2 = forecast time zone (
        used in clause 5.3.6.2.7)
    * unit = unit (used in clause
        5.2.6.2.11, 5.3.6.2.7)
    * span =
        - hourly: precipitation for an
            hour just before
            observation time
        - pre03: precipitation for 3 hours
            just before observation time
        - pre06: precipitation for 6 hours
            just before observation time
        - pre12: precipitation for 12 hours
            just before observation time
        - pre24: precipitation for 24 hours
            just before observation time
        - daily: precipitation from 0 to 24
            (used in clause 4.2.9•A5.2.6.2.11)
RELATED CLAUSES: 5.2.6.2.11, 5.3.6.2.7 -->

<!ELEMENT snow-depth                (#PCDATA) >
<!ATTLIST snow-depth
    unit          CDATA          "cm"
    measure       (auto|manual) "auto" >
<!-- 4.2.10 Snow Depth
NOTATION: * number in cm
          * If less than 1cm, 0cm
          * If it is not possible to get any
            observation data, "no snow depth"
ATTRIBUTE: * unit = unit (used in clause
            5.2.6.2.12)
          * measure = watch observation
            ("manual") or observeaion by
            snow-fall instrument ("auto")
            (used in clause 4.2.10, 5.2.6.2.12)
RELATED CLAUSES: 5.2.6.2.12 -->

<!ELEMENT snow-fall                (#PCDATA) >
<!ATTLIST snow-fall
    time1         CDATA          #IMPLIED
    time2         CDATA          #IMPLIED
    unit          CDATA          "cm"
    measure       (auto|manual) "auto"
    span          (hourly|daily21|daily09) "hourly" >
<!-- 4.2.11 Snow Fall
NOTATION: number in cm
ATTRIBUTE: * time1 = forecast time
          * time2 = forecast time zone
            (used in clause 5.3.6.2.8)
          * unit = unit (used in clause
            5.2.6.2.13, 5.3.6.2.8)
          * measure = watch observation
            ("manual") or observation by
            snowfall instrument ("auto")
            manual = - If less than 1cm, 0cm
                    - If not snowfall, "non"
                    - If it is not possible to
                      get any observation
                      data, "nodata"

```

```

        auto = - If negative number, 0
              - If it is not possible to
                get any observation data,
                "nodata"
              (used in clause 4.2.11, 5.2.6.2.13)
    * span =
      - hourly: value for an hour just
                before observation time
      - daily21: value from 21 on the
                previous day to 21 on
                the designated day
      - daily09: value from 9 on the
                designated day to 9 on
                the following day
              (used in clause 4.2.11, 5.2.6.2.13)
    RELATED CLAUSES: 5.2.6.2.13, 5.3.6.2.8      -->

<!ELEMENT road-surface      (observe-place,observe-time,surface?,
surface-detail?,surface-temperature?,surface-salt?) >
<!-- 4.3 Road Surface Information
      EXPLANATION: information about condition of road
      -->

<!ELEMENT surface          (#PCDATA) >
<!ATTLIST surface          type      (code|text)      "text" >

<!-- 4.3.3 Road Surface Condition
      NOTATION: numeric character
      CONSTRAINT: "1" to "7" as specified in
                 clause 4.3.3 in the specification
      ATTRIBUTE: code("code") or character ("text")
      -->

<!ELEMENT surface-detail    (#PCDATA) >
<!ATTLIST surface-detail    type      (code|text)      "text" >

<!-- 4.3.4 Detailed Road Surface Condition
      NOTATION: numeric characters
      CONSTRAINT: "1" to "13" as specified in
                 clause 4.3.4 in the specification
      ATTRIBUTE: code("code") or character ("text")
      -->

<!ELEMENT surface-temperature (#PCDATA) >

<!-- 4.3.5 Road Surface Temperature
      NOTATION: centigrade number to the first decimal
                place. Decimals are omissible
      -->

<!ELEMENT surface-salt      (#PCDATA) >
<!-- 4.3.6 Road Surface Salt density
      NOTATION: percentage to the first decimal place
      -->

<!ELEMENT camera-image      (observe-place,observe-time,image-file,camera?,
comment?,image-process?,equipment-condition?) >
<!-- 4.4 Camera Image
      EXPLANATION: information about road watch by

```

```

                                camera image                                -->

<!ELEMENT image-file          (#PCDATA) >
<!ATTLIST image-file          src          CDATA          #REQUIRED >
<!-- 4.4.3 Image File
                                NOTATION: characters
                                ATTRIBUTE: src = location of image file    -->

<!ELEMENT camera              (#PCDATA) >
<!-- 4.4.4 Camera Data
                                NOTATION: characters                          -->

<!ELEMENT comment             (#PCDATA) >
<!-- 4.4.5 Image Comment
                                NOTATION: characters
                                EXPLANATION: explanation of camera image    -->

<!ELEMENT image-process       (#PCDATA) >
<!-- 4.4.6 Image Process Information
                                NOTATION: characters
                                EXPLANATION: explanation of event of camera image -->

<!ELEMENT equipment-condition (#PCDATA) >
<!-- 4.4.7 Equipment Condition
                                NOTATION: characters                          -->

<!ELEMENT congestion          (observe-place,observe-time,congestion-status,
congestion-top?,congestion-direction,congestion-length?,outbreak-time?,
congestion-cause?) >

<!-- 4.5 Traffic Jam Information                                -->

<!ELEMENT congestion-status    (#PCDATA) >
<!-- 4.5.3 Congestion Status  NOTATION: characters                          -->

<!ELEMENT congestion-top       (point?,route-name?,route-position?) >

<!-- 4.5.4 Congestion Top    NOTATION: refer to clause 3.1                    -->

<!ELEMENT congestion-direction (#PCDATA) >
<!-- 4.5.5 Congestion Direction
                                NOTATION: characters                          -->

<!ELEMENT congestion-length    (#PCDATA) >
<!-- 4.5.6 Congestion Length  NOTATION: * number
                                * km
                                * up to the first decimal place              -->

<!ELEMENT outbreak-time        (#PCDATA) >
<!-- 4.5.7 Congestion Outbreak
                                NOTATION: characters. refer to the notation of
                                clause 2.2.1
                                RELATED CLAUSES: 6.1.2.1.1.1                  -->

<!ELEMENT congestion-cause     (#PCDATA) >

<!-- 4.5.8 Congestion Cause

```

NOTATION: refer to clause 4.5.8 in the
specification. any other characters -->

```
<!ELEMENT regulation      (regulation-place,regulation-time?,
regulation-class,regulation-cause?,regulation-direction?,regulation-start?,
regulation-end?) >
<!-- 4.6 Regulation Information -->
```

```
<!ELEMENT regulation-place  (point?,route) >
<!-- 4.6.1 Regulation Place NOTATION: refer to clause 3.1 -->
```

```
<!ELEMENT regulation-time   (#PCDATA) >
<!-- 4.6.2 Regulation Time NOTATION: refer to clause 2.2.1 -->
```

```
<!ELEMENT regulation-class  (#PCDATA) >
<!-- 4.6.3 Regulation Class NOTATION: characters
EXPLANATION:* regulation class
* refer to clause 4.6.3 in the
specification -->
```

```
<!ELEMENT regulation-cause  (#PCDATA) >
<!-- 4.6.4.Regulation Cause NOTATION:* characters
EXPLANATION:* regulation cause
* refer to clause 4.7.4 in the
specification -->
```

```
<!ELEMENT regulation-direction (#PCDATA) >
<!-- 4.6.5 Regulation Direction
NOTATION: refer to clause 4.6.5 in the
specification. any other characters -->
```

```
<!ELEMENT regulation-start  (#PCDATA) >
<!-- 4.6.6 Regulation Start NOTATION: refer to clause 2.2.1 -->
```

```
<!ELEMENT regulation-end    (#PCDATA) >
<!-- 4.6.7 Regulation End NOTATION: refer to clause 2.2.1. If unknown,
"unknown" -->
```

```
<!ELEMENT traffic-flow      (observe-place,observe-time,time-unit,volume?,
speed?,occupancy?) >
<!-- 4.7 Traffic Information -->
```

```
<!ELEMENT time-unit         (#PCDATA) >
<!-- 4.7.3 Observation Time Unit
NOTATION: refer to the notation of clause 2.2.4
in the specification -->
```

```
<!ELEMENT volume            (#PCDATA) >
<!-- 4.7.4 Flow Volume NOTATION: characters. If possible, each type of
cars is separated by comma. -->
```

```
<!ELEMENT speed             (#PCDATA) >
<!-- 4.7.5 Average Speed NOTATION: number. "km/h" -->
```

```
<!ELEMENT occupancy         (#PCDATA) >
```

```

<!-- 4.7.6 rate of occupancy NOTATION: percentage
EXPLANATION: rate of occupancy at the
observation point -->

<!ELEMENT travel-time (observe-time,origin,destination,travel-route?,
duration) >

<!-- 4.8 Travel Time Information -->

<!ELEMENT origin (#PCDATA) >
<!-- 4.8.2 Observation Origin
NOTATION: characters
EXPLANATION: point information which is the
starting point of the travel time -->

<!ELEMENT destination (#PCDATA) >

<!-- 4.8.3 Observation End NOTATION: characters -->

<!ELEMENT travel-route (#PCDATA) >
<!-- 4.8.4 Travel Route NOTATION: * characters
* forward direction
(origin->destination)
* separated by slash -->

<!ELEMENT duration (#PCDATA) >

<!-- 4.8.5 Travel Time NOTATION: * characters
* in minute
* refer to notation of clause 2.2.4 in
the specification -->

<!ELEMENT specific-place (place,last-update,advice,image*,advice-period?)>
<!-- 4.9 Information About Specific Point
EXPLANATION: information to call a driver's
attention -->

<!ELEMENT advice (#PCDATA) >
<!ATTLIST advice spec (attention|scene|feature) #IMPLIED >
<!-- 4.9.3 Contents of Information
NOTATION: characters
ATTRIBUTE: spec = classification of contents of
information
* "attention": information about
the specific point
* "scene": information about view
* "feature": information about nature,
history, and road institution
of the route -->

<!ELEMENT info-file (#PCDATA) >
<!ATTLIST info-file href CDATA #REQUIRED >
<!-- 4.9.4 Info-File NOTATION: characters
ATTRIBUTE: href = location of Info-File -->

<!ELEMENT advice-period (#PCDATA) >
<!-- 4.9.5 Target Period NOTATION: refer to the notation of clause 2.2.4

```



```

<!ELEMENT synopsis                (#PCDATA) >
<!-- 5.2.6.2.4 General Weather Condition
      NOTATION: characters
      RELATED CLAUSES: 5.3.6.2.3          -->

<!ELEMENT forecast                (forecast-class,forecast-area,sending-station,
announce-time,forecast-date,forecast-info*) >
<!-- 5.3 Weather Forecast
      EXPLANATION: information about weather forecast          -->

<!ELEMENT forecast-class          (#PCDATA) >
<!-- 5.3.1 Forecast Class
      NOTATION: characters          -->

<!ELEMENT forecast-area          (forecast-areaname?) >
<!-- 5.3.2 Area and Point to forecast
      EXPLANATION: name and location information about
                  area, point, and mesh to forecast
      RELATED CLAUSES: 6.1.2.1.2.3          -->

<!ELEMENT forecast-areaname      (#PCDATA) >
<!-- 5.3.2.1 Area and Point to forecast
      NOTATION: characters          -->

<!ELEMENT forecast-date          (target-time|target-date) >
<!-- 5.3.5 Forecast Date          -->

<!ELEMENT target-time            (#PCDATA) >
<!-- 5.3.5.1 Forecast Target Time
      NOTATION: refer to clause 2.2.1 or 2.2.4 (2)          -->

<!ELEMENT target-date            (start-date,interval,forecast-timedef,times) >
<!-- 5.3.5.2 Forecast Target Date          -->

<!ELEMENT start-date             (#PCDATA) >
<!-- 5.3.5.2.1 Forecast Start Date
      EXPLANATION: refer to clause 2.2.1          -->

<!ELEMENT interval               (#PCDATA) >
<!-- 5.3.5.2.2 Forecast Interval
      EXPLANATION: refer to clause 2.2.4 (1)          -->

<!ELEMENT forecast-timedef       (#PCDATA) >
<!-- 5.3.5.2.3 Forecast Start Date
      NOTATION: characters
      EXPLANATION: forecast relative to particular
                  time or time zone          -->

<!ELEMENT times                  (#PCDATA) >
<!-- 5.3.5.2.4 Forecast Number
      NOTATION: number          -->

```

```

<!ELEMENT forecast-info          (forecast-element*) >

<!-- 5.3.6 Forecast Information -->

<!ELEMENT forecast-element      (synopsis*,forecast-weather*,temperature*,
precip-prob*,precipitation*,wind-direction*,wind-speed*,waves*,max-temp*,
min-temp*) >

<!-- 5.3.6.2 Forecast Element Information -->

<!ELEMENT forecast-weather      (#PCDATA) >
<!ATTLIST forecast-weather      telop      CDATA      #IMPLIED >
<!-- 5.3.6.2.4 Forecast Weather
NOTATION: characters
ATTRIBUTE: telop = telop number
EXPLANATION: refer to clause 5.3.6.2.4 in the
specification -->

<!ELEMENT precip-prob          (#PCDATA) >
<!ATTLIST precip-prob          time1     CDATA      #IMPLIED
time2     CDATA      #IMPLIED >
<!-- 5.3.6.2.6 Precipitation Probability
NOTATION: * 4-digit number
* 1st decimal place : 0(rain),
1(rain or snow), 2(snow or rain),
3(snow)
1st-4st decimal places : probability
ATTRIBUTE: * time1 = forecast time
* time2 = forecast time zone -->

<!ELEMENT waves                (#PCDATA) >
<!ATTLIST waves                time1     CDATA      #IMPLIED
time2     CDATA      #IMPLIED >
<!-- 5.3.6.2.12 Waves
NOTATION: * characters
* meter
* If less than 3m, in 0.5m. If more
than 3m, in 1.0m
* to first decimal place
ATTRIBUTE: * time1 = forecast time
* time2 = forecast time zone -->

<!ELEMENT max-temp              (forecast-location?,target-zone?,temperature) >
<!-- 5.3.1.2.13 Maximum Temperature -->

<!ELEMENT forecast-location     (latitude?,longitude?,altitude?,point-name?,
location-code?) >
<!-- 5.3.6.2.13.1 Forecast Point
EXPLANATION: point to forecast
RELATED CLAUSES: 5.3.6.2.14.1 -->

<!ELEMENT target-zone          (#PCDATA) >
<!-- 5.3.6.2.13.2 Target Time Zone
NOTATION: refer to clause 2.2.4, or
morning(00-09),daytime(09-18),
whole day(00-24)
RELATED CLAUSES: 5.3.6.2.14.2 -->

```

```

<!ELEMENT min-temp          (forecast-location?,target-zone?,temperature) >
<!-- 5.3.6.2.14 Minimum Temperature                                -->

<!--*****-->
<!--*          Disaster Prevention Information                    *-->
<!--*          (Chapter 6. Disaster Prevention Information)      *-->
<!--*****-->

<!ELEMENT disaster-info     (earthquake,volcano,flood) >
<!-- 6 Disaster Information                                     -->

<!ELEMENT earthquake        (basic-info,disaster*,disaster-restore*) >
<!-- 6.1 Earthquake                                         -->

<!ELEMENT disaster         (meteorological-ag*,road-authority*) >
<!-- 6.1.2 Disaster                                         -->

<!ELEMENT meteorological-ag (earthquake-info*,tsunami-forecast*) >
<!-- 6.1.2.1 Meteorological Agency Information              -->

<!ELEMENT earthquake-info   (outbreak-time?,seismic-center?,
seismic-intensity-info*) >
<!-- 6.1.2.1.1 Earthquake Information                      -->

<!ELEMENT seismic-center    (point?,seismic-depth?,magnitude?) >
<!-- 6.1.2 Seismic Center                                  -->

<!ELEMENT seismic-depth     (#PCDATA) >
<!-- 6.1.2.1.1.2.2 Seismic Depth
NOTATION: * number
          * km                                         -->

<!ELEMENT magnitude         (#PCDATA) >
<!-- 6.1.2.1.1.2.3 magnitude of the center of the earthquake
NOTATION: * characters
          * magnitude                                     -->

<!ELEMENT seismic-intensity-info
          (point?,seismic-intensity?) >
<!-- 6.1.2.1.1.3 Seismic Intensity Information            -->

<!ELEMENT seismic-intensity (#PCDATA) >
<!-- 6.1.2.1.1.3.2 Intensity NOTATION: characters
RELATED CLAUSES: 6.1.2.2.1.2                             -->

<!ELEMENT tsunami-forecast  (warning-type?,st-warning?,forecast-area?,
sending-station?,announce-time?,tsunami-arrive-time?,tsunami-height?) >
<!-- 6.1.2.1.2 Tsunami Forecast                           -->

<!ELEMENT warning-type      (#PCDATA) >
<!-- 6.1.2.1.2.1 Tsunami Warning
NOTATION: * characters
          * type of tsunami warning                     -->

```

```

<!ELEMENT st-warning          (#PCDATA) >
<!-- 6.1.2.1.2.2 Warning kind
          NOTATION: characters          -->

<!ELEMENT tsunami-arrive-time (#PCDATA) >
<!-- 6.1.2.1.2.6 Tsunami Arrival Time
          NOTATION: refer to clause 2.1.1          -->

<!ELEMENT tsunami-height      (#PCDATA) >
<!-- 6.1.2.1.2.7 Tsunami Height
          NOTATION: * number
                  * in meter
          RELATED CLAUSES: 6.1.3.1.1.5.1          -->

<!ELEMENT road-authority      (eqrthquaker-info*,suffer-info*) >
<!-- 6.1.2.2 Road Manager Information          -->

<!ELEMENT eqrthquaker-info    (observe-point?,seismic-intensity?,
spectral-intensity?,accel-max?,response-speed?,check?) >
<!-- 6.1.2.2.1 Seismometer Information          -->

<!ELEMENT spectral-intensity  (#PCDATA) >
<!-- 6.1.2.2.1.3 SI Value          NOTATION: number          -->

<!ELEMENT accel-max           (accel-hmax?,accel-vmax?) >
<!-- 6.1.2.2.1.4 Max acceleration          -->

<!ELEMENT accel-hmax          (#PCDATA) >
<!ATTLIST accel-hmax          dir      (NS|EW)          #IMPLIED >
<!-- 6.1.2.2.1.4.1 Horizontal          NOTATION: number
          EXPLANATION: Horizontal Max Acceleration (gal)
          ATTRIBUTE: dir = direction (NS|EW)          -->

<!ELEMENT accel-vmax          (#PCDATA) >
<!-- 6.1.2.2.1.4.2 Vertical          NOTATION: number
          EXPLANATION: Vertical Max Acceleration (gal)          -->

<!ELEMENT response-speed      (#PCDATA) >
<!-- 6.1.2.2.1.5 Response Speed
          NOTATION: * number
                  * cm/sec          -->

<!ELEMENT check               (#PCDATA) >
<!-- 6.1.2.2.1.6 Machine Working Condition
          NOTATION: characters          -->

<!ELEMENT suffer-info         (suffer-point?,suffer-scale?,suffer-image?) >
<!-- 6.1.2.2.2 Road Suffering Information          -->

<!ELEMENT suffer-point        (#PCDATA) >
<!-- 6.1.2.2.2.1 Suffering Point
          NOTATION: refer to clause 3.1.2.4          -->

<!ELEMENT suffer-scale        (#PCDATA) >

```

```

<!-- 6.1.2.2.2 Suffering Scale
                                NOTATION: characters                -->

<!ELEMENT suffer-image          (#PCDATA) >
<!ATTLIST suffer-image          href          CDATA          #REQUIRED >
<!-- 6.1.2.2.3 Suffering Image
                                NOTATION: characters                -->
                                ATTRIBUTE: src = location of image file
<!ELEMENT disaster-restore      (hazard-map*,refuge-info*,communication-info*,
disaster-prevention*,restoration-plan*) >

<!-- 6.1.3 Disaster Prevention And Restoration Measures Information    -->

<!ELEMENT hazard-map            (tsunami*,land-rockslide*) >

<!-- 6.1.3.1 Hazard Map Information                                    -->

<!ELEMENT tsunami              (escape-map?,point?,route?,zone?,height?) >

<!-- 6.1.3.1.1 Tsunami                                              -->

<!ELEMENT escape-map           (#PCDATA) >
<!ATTLIST escape-map           href          CDATA          #REQUIRED >

<!-- 6.1.3.1.1.1 Map
                                EXPLANATION: characters                -->
                                ATTRIBUTE: href = location of file
<!ELEMENT zone                 (route-position+) >

<!-- 6.1.3.1.1.4 Zone
                                NOTATION: * refer to clause 3.1.2.4
                                        * in KP                            -->

<!ELEMENT height               (tsunami-height?,road-height?,relative-height?)>
<!-- 6.1.3.1.1.5 height                                             -->

<!ELEMENT road-height          (#PCDATA) >
<!-- 6.1.3.1.1.5.2 Road Height
                                NOTATION: * number
                                        * in meter                            -->

<!ELEMENT relative-height      (#PCDATA) >

<!-- 6.1.3.1.1.5.3 Relative Height
                                NOTATION: * number
                                        * in meter                            -->
                                EXPLANATION: (Tsunami Height)-(Road Height)
<!ELEMENT land-rockslide       (landslide?,rockslide?) >
<!-- 6.1.3.1.2 Land And Rock Slide                                  -->

<!ELEMENT landslide            (#PCDATA) >
<!-- 6.1.3.1.2.1 Land Slide
                                NOTATION: refer to clause 3.1.2.4        -->

<!ELEMENT rockslide            (#PCDATA) >
<!-- 6.1.3.1.2.2 Rock Slide
                                NOTATION: refer to clause 3.1.2.4        -->

```

```

<!ELEMENT refuge-info          (refuge-place?,refuge-route?) >
<!-- 6.1.3.2 Refuge Information                                -->

<!ELEMENT refuge-place        (refuge-map?,name?,liaison?,accommodation?,
parking?,store?) >
<!-- 6.1.3.2.1 Refuge Place Information                      -->

<!ELEMENT refuge-map          (#PCDATA) >
<!ATTLIST refuge-map          href          CDATA          #REQUIRED >
<!-- 6.1.3.2.1.1 Map
                                EXPLANATION: characters
                                ATTRIBUTE: href = location of file
                                -->

<!ELEMENT name                (#PCDATA) >
<!-- 6.1.3.2.1.2 Name          NOTATION: characters
                                RELATED CLAUSES: 6.1.3.4.2.2
                                -->

<!ELEMENT accommodation      (#PCDATA) >
<!-- 6.1.3.2.1.4 Accommodated men
                                NOTATION: characters
                                -->

<!ELEMENT parking            (#PCDATA) >
<!-- 6.1.3.2.1.5 Parking Ability
                                NOTATION: characters
                                -->

<!ELEMENT store               (#PCDATA) >
<!-- 6.1.3.2.1.6 Store
                                NOTATION: characters
                                RELATED CLAUSES: 6.1.3.4.2.4
                                -->

<!ELEMENT refuge-route        (route-map?,route?) >
<!-- 6.1.3.2.2 Refuge Route
                                -->

<!ELEMENT route-map          (#PCDATA) >
<!ATTLIST route-map          href          CDATA          #REQUIRED >
<!-- 6.1.3.2.2.1 Route Map
                                EXPLANATION: characters
                                ATTRIBUTE: href = location of file
                                -->

<!ELEMENT communication-info (inter-organization?,in-organization?) >
<!-- 6.1.3.3 Communication Information                      -->

<!ELEMENT inter-organization (authority-name?,liaison?) >
<!-- 6.1.3.3.1 cooperation between facilities              -->

<!ELEMENT in-organization    (day-off?,staff-call?) >
<!-- 6.1.3.3.2 cooperation inside facilities              -->

<!ELEMENT day-off            (#PCDATA) >
<!ATTLIST day-off            href          CDATA          #REQUIRED >
<!-- 6.1.3.3.2.1 day off and nighttime
                                NOTATION: characters
                                ATTRIBUTE: href = location of file
                                -->

<!ELEMENT staff-call         (authority-name?,liaison?) >
<!-- 6.1.3.3.2.2 Staff Call System
                                EXPLANATION: off-duty staff call system
                                -->

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<!ELEMENT message                (#PCDATA) >

<!ELEMENT website                (#PCDATA) >
<!ATTLIST website                href          CDATA          #REQUIRED
                                type          CDATA          "HTML" >

<!ELEMENT object                 (#PCDATA) >

<!ELEMENT outline                (#PCDATA) >

<!ELEMENT detail                 (#PCDATA) >

<!ELEMENT image                  (#PCDATA) >
<!ATTLIST image                  src          CDATA          #REQUIRED >

<!ELEMENT date                   (season?,week?,time?,date-note?) >

<!ELEMENT season                 (#PCDATA) >

<!ELEMENT week                   (#PCDATA) >

<!ELEMENT time                   (#PCDATA) >

<!ELEMENT date-note              (#PCDATA) >

<!ELEMENT keyword                (#PCDATA) >

<!ELEMENT contact                (contact-name?, zip-code?, address?, contact-method*)
>

<!-- Contact Name (contact-name) (Defined in 3.3.2.1) -->
<!-- Zip Code (zip-code)         (Defined in3.3.2.2) -->
<!-- Address (address)           (Defined in3.3.2.3) -->
<!-- Contact Method (contact-method) (Defined in3.3.2.4) -->

<!ELEMENT equipment              (parking-num*,toilet-num*,others-num*) >

<!ELEMENT parking-num            (#PCDATA) >
<!ATTLIST parking-num            type          CDATA          #REQUIRED >

<!ELEMENT toilet-num             (#PCDATA) >
<!ATTLIST toilet-num             type          CDATA          #REQUIRED >

<!ELEMENT others-num             (#PCDATA) >
<!ATTLIST others-num            type          CDATA          #REQUIRED >

<!-- End                                                                    -->

```