



International Civil Aviation Organization

ATNICG/2-WP/9

**THE SECOND MEETING OF AERONAUTICAL
TELECOMMUNICATION NETWORK (ATN)
IMPLEMENTATION CO-ORDINATION GROUP
OF APANPIRG**



Hong Kong, China, 28 May – 1 June 2007

Agenda Item 9: Identification of urgent ATN/AMHS Implementation related regional guidance material to be developed.

ATNICG STRATEGIC OBJECTIVE: EFFICIENCY

TASK (4) UPDATE BASELINE DOCUMENTATION

**DRAFT CHANGES TO
THE ASIA/PACIFIC NSAP ADDRESSING PLAN**

(Presented by United States of America)

SUMMARY

This working paper contains draft changes to Asia/Pacific ATN NSAP Addressing Plan as proposed in ATN ICG 2 Task 4 Working Paper 1, "Proposal for a Common Address Prefix for the Asia, Pacific, and North America ICAO Regions"

DRAFT CHANGES TO ATN NSAP ADDRESSING PLAN

4.3.3 The ADM Field

The ADM field is used to further partition the ATN Network Addressing Domain. The field designates a single State or Organization. Depending on what the VER field is set to will determine what values should be used in the ADM field.

When the VER field is set to "81" (Fixed ATSC), the ATN SARPs permits two possible ways for encoding the ADM field.

The first method recommends that the State’s three character alphanumeric ISO country code is used, as defined in ISO 3166. States may choose this method, however it will provide less flexibility than the second method for the addressing of regional entities (e.g. regional RDCs or regional organizations that are not country specific).

The second method that is recommended for use in the Asia/Pacific region is to use the first octet of the field to define the ICAO region. [Individual regions may be indicated or a combined Asia, Pacific, and North America \(NAM\) region may be used.](#) This would permit the reduction of the routing information that would otherwise be generated. It is recommended that the remaining two octets of the field will further identify the country, RDCs and the regional organizations that are not country specific as follows:

- For the identification of a country, it is recommended that States use the ICAO two letter location indicator (Reference 4) instead of the two character alphanumeric ISO 3166 country code. The structure of the ICAO two letter location indicator allows for a more efficient identification of a location. For example, indicators starting with the same letter “V” designate several countries in the same local region (e.g. Thailand, Sri Lanka, India, Cambodia etc.). The second letter will actually define the specific country within this local region (e.g. “VT” for Thailand, “VC” for Sri Lanka etc.). Where a country has several ICAO two letter location indicators allocated to it, the assigning authority of the ADM field will be responsible in determining the preferred location indicator to represent that country. For example, the indicators “VA”, “VI”, “VO”, “VE” are assigned to India and one of these indicators will be selected to represent India. The encoding of the ICAO two letter location indicators will be upper case alphanumeric values.
- For regional organizations that are not country specific, it is recommended to allocate a lower case alphanumeric value so as there will be no conflict with the ICAO two letter location indicators.
- For the addressing of RDCs (e.g. Island RDCs, Backbone RDCs), in particular for those that are not country specific, it is recommended to allocate codes with the most significant bit set to 1 in the second octet. Valid values would be in the hexadecimal range [8000 – FFFF].

ICAO Asia/Pacific Regional Office would be the allocation authority of the ADM field. In summary, the values allocated for the ADM field is indicated in Table 4.3.3-1.

VER Field Network Addressing Domain	ADM Field Values
Fixed AINSC	Derived from the set of three-character alphanumeric characters from Doc. 8585 (Reference 5).
Mobile AINSC	Derived from the set of three-character alphanumeric characters from Doc. 8585.
Fixed ATSC	To allow for efficient routing information to be exchanged, it is proposed that the ICAO Regional code be used in the first octet of the ADM field followed by the ICAO two-letter location indicator for countries. The Regional codes are shown below. Regional Codes: [1000 0000] Africa [1000 0001] Asia [1000 0010] Caribbean [1000 0011] Europe [1000 0100] Middle East [1000 0101] North America [1000 0110] North Atlantic

VER Field Network Addressing Domain	ADM Field Values
	<p>[1000 0111] Pacific</p> <p>[1000 1000] South America</p> <p><u>[1001 0001]</u> <u>Asia/Pac/NAM</u></p> <p>For example Thailand would be represented <u>as part of the Asia region</u> by the following hexadecimal sequence: “815654” <u>or as part of the combined Asia/Pac/NAM region by the hexadecimal sequence “915654”</u>. Table 4.3.3-2 provides further examples for a selected number of countries.</p> <p>Where a two letter country code is not applicable, the following rules would apply:</p> <p>ICAO would assign lower case alphanumeric characters using a two letter value to organizations that wish to be based in a particular region. For example, if an organization is to be based in the Pacific region and wanted to be represented by the characters ‘sa’, this would be represented by the following hexadecimal sequence: 877361</p> <p>ICAO would assign regional codes for RDCs where a country code or organization code is not applicable. Values would be assigned with the most significant bit set to 1 in the second octet. For example a RDC established in the Pacific region would be represented by the following hexadecimal sequence: 878100.</p>
Mobile ATSC	As for Fixed ATSC

Table 4.3.3-1 - Defined Values for the ADM Field

Fixed or Mobile Asia/Pacific ATSC Addressing Domain	Hexadecimal Code of the ADM Field	Comment
Australia	<u>9187</u> 5942	Asia/ <u>Pac/NAM</u> Region + ‘YB’
China	<u>9184</u> 5A42	Asia/ <u>Pac/NAM</u> Region + ‘ZB’
India	<u>9184</u> 5649	Asia/Pac/NAM region + ‘VA’
Fiji	<u>9187</u> 4E46	<u>Asia/Pac/NAM</u> ific -Region + ‘NF’
Japan	<u>9184</u> 524A	Asia/ <u>Pac/NAM</u> Region + ‘RJ’
New Zealand	<u>9187</u> 4E5A	Asia/ <u>Pac/NAM</u> Region + ‘NZ’
Singapore	<u>9184</u> 5753	Asia/Pac/NAM Region + ‘WS’
Thailand	<u>9184</u> 5654	Asia/Pac/NAM Region + ‘VT’
<u>United States</u>	<u>915553</u>	<u>Asia/Pac/NAM Region + ‘US’</u>
Viet Nam	<u>9184</u> 5656	Asia/ <u>Pac/NAM</u> Region + ‘VV’

Table 4.3.3-2 – Example of Proposed ADM Value Assignment for Selected Asia, Pacific, and North America Entities