WORLD METEOROLOGICAL ORGANIZATION
WMO INFORMATION SYSTEM (WIS)
WIS Common Alerting Protocol (CAP, X.1303) Implementation Workshop
Geneva, Switzerland, 22-23 June 2009

Original: ENGLISH ONLY

Source:	ITU-T Q.4/17 Rapporteur
Title:	Draft principles and framework for CAP identifiers
Purpose:	For discussion/decision

Introduction, scope, and objectives

This contribution is informal submission by the Rapporteur, as ITU-T Q.4/17 is assigned the responsibility for the evolution ITU-T Rec. 1303 – the ITU-T mirror of the CAP protocol that contains a very useful authoritative translation of the CAP schema into a significantly more compact ASN.1 module for use in applications where message size matters.

In addition, Q.4/17 in its role as the principal cybersecurity expert group in ITU-T, may find CAP as an important means for the exchange of cybersecurity information exchange, including vulnerabilities and network attack forensics. Q.4/17 in this workshop, is also serving as a liaison mechanism for two directly related ITU-T document produced by Rapporteur Group Q.12/17 (Abstract Syntax Notation One (ASN.1), Object Identifiers (OIDs) and associated registration), and Rapporteur Group Q.1/2 (Application of numbering, naming, addressing and identification plans for fixed and mobile telecommunications services).

Q.12/17 proposes the potential use of the joint ITU-T|ISO Object Identifier (OID) namespace for possible use for CAP identifiers. Q.1/2 suggests that source, sender, and language be considered in enumeration of CAP identifiers – which is included below.

The Common Alerting Protocol (CAP) is a global standard for simple, structured exchange of alerting messages associated with an event for many diverse purposes – known and unknown – among undefined parties. CAP has been embraced for "authority-to-citizen" mass warning applications; but is only one of countless uses. In conjunction with those activities, certain identifiers are used, and it seems desirable through this workshop to reach a global consensus on CAP identifier principles and structure that includes:

- What are CAP identifiers
- Why a set of common global principles and framework are useful
- The essential features of those principles and framework

Contact: Anthony M. Rutkowski
ITU-T Q.4/17 Rapporteur
Yaana Technologies
Tel: +1 408.854.8041
Email: tony@yaanatech.com

What are CAP identifiers

Other contributions and dialogue associated with this workshop should attempt to compile the use cases for what kinds of identifiers that implementers have begun to use for CAP. At least six different kinds of CAP identifier tags seem probable:

1) a message schema or module identifier
2) individual message identifier
3) the associated event identifier
4) identifiers for the entities associated with the handling of the message (i.e., those who create (source), send, convey, and receive messages, whether persons, organizations, or objects, physical or virtual)
5) identifiers for policies associated with the message
6) language

Why a set of common global principles and structure for CAP identifiers are useful

CAP can be used by anyone for anything, anywhere, at any time. There is no way to control CAP use. However, there may be common interests among many communities to enter into an understanding regarding the use, creation, administration, discovery, and verification of a common set of principles and structure for CAP identifiers. These interests include:

a) enhancing the value of the CAP messages through widespread sharing of the related event information and a persistent identity over long periods of time that allows for analysis of those events;
b) enhancing the security of CAP messages by using the identifiers to independently obtain information associated with the message;
c) enhancing the flexibility of CAP messages by altering message "state" information, e.g., altering the message status.

The essential features of CAP identifier principles and structure

A. CAP identifiers MUST be globally unique in a common namespace
B. The CAP identifier common namespace MUST accommodate distributed, autonomous, dynamic, extensible CAP uses and communities.
C. CAP identifiers MUST be structured to enable autonomous, distributed global discovery through hierarchical recursive queries in the hierarchy. See, for example, Figure 1, below.
D. CAP identifiers MUST not exceed a length of [TBD] or a hierarchical depth exceeding [TBD] levels
E. CAP identifiers SHOULD have minimal internationalization impediments, e.g., consist of numbers
F. CAP identifiers SHOULD be structured so that usage, geographical, jurisdictional, and global hierarchical assignments can exist concurrently in the overall namespace.

G. Registrars that assign CAP identifiers SHOULD obtain with levels of assurance sufficient for the application, information concerning the registrants or objects to which the identifiers are assigned

H. Registrars that assign CAP identifiers SHOULD, as appropriate for the application or usage, support common structured query-response availability of the registrant or object information or a pointer to the information location for other users within the same community.

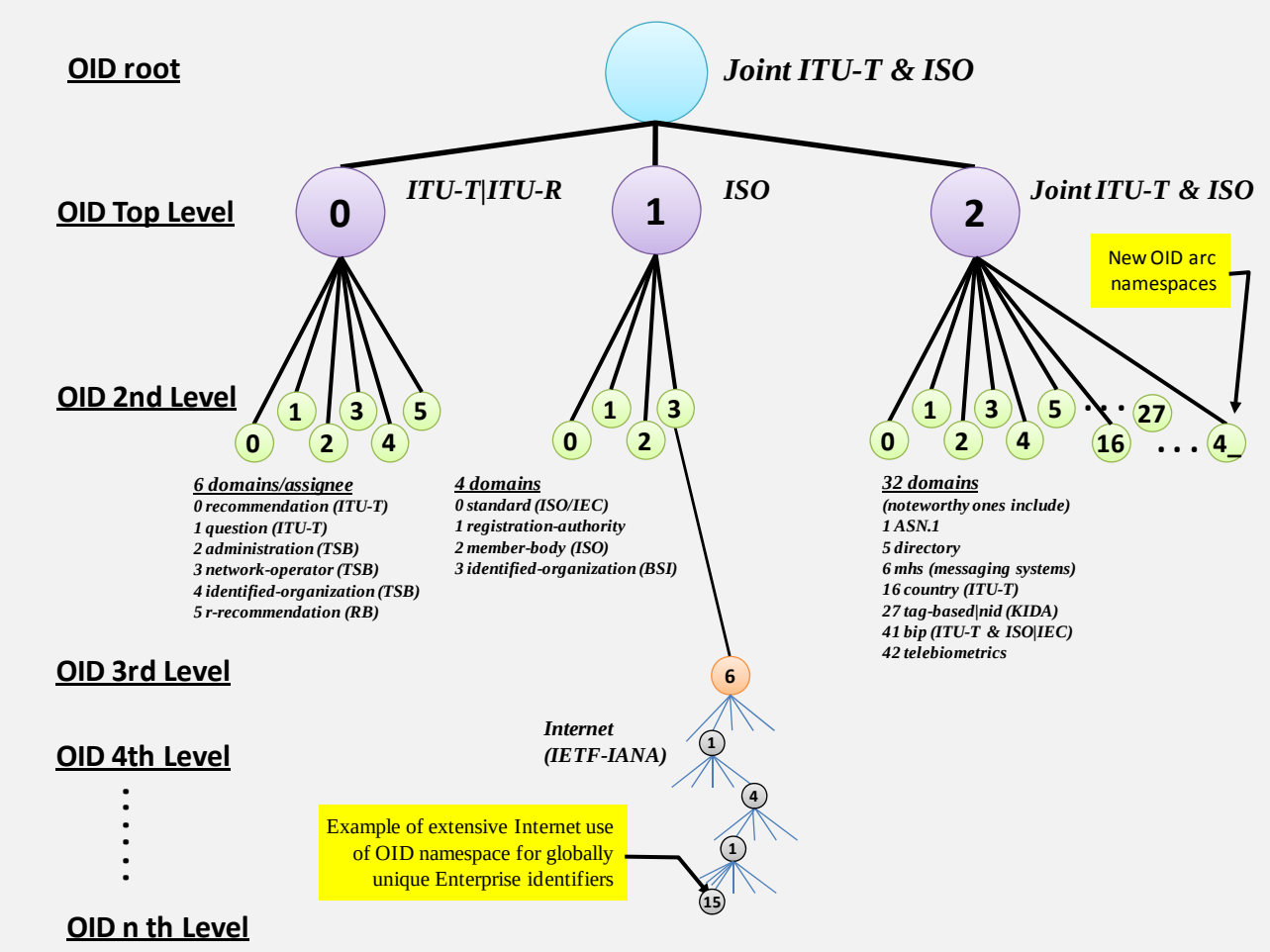

Figure 1 – A Depiction of the OID Namespace and its hierarchical structure

Attachments:

1. ITU-T SG 17 (Geneva, 11-20 February 2009), Proposal to use object identifiers (OIDs) as globally unique identifiers for the Common Alerting Protocol (CAP).
2. Rapporteur, Q.1/2, Liaison to WMO on seeking views on the feasibility of message identifier global harmonization (sent on 8 June 2009), Doc. ITU-T TD95(PLEN/2).

INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION STANDARDIZATION SECTOR

STUDY PERIOD 2009-2012

STUDY GROUP 17

TD 0222

English only

Original: English

Question(s): 12/17 Geneva, 11-20 February 2009

TEMPORARY DOCUMENT

Source: ITU-T SG 17 (Geneva, 11-20 February 2009)

Title: Proposal to use object identifiers (OIDs) as globally unique identifiers for the Common Alerting Protocol (CAP)

LIAISON STATEMENT

For action to: **OASIS EM TC**

For comment to:

For information to:

Approval:

Deadline: **13 September 2009**

Contact: John Larmouth
UK
Email: j.larmouth@btinternet.com

Contact: Olivier Dubuisson
France Telecom
France
Tel: +22 3 96 05 38 50
Email: olivier.dubuisson@orange-ftgroup.com

We have read with great interest the report on CAP Implementers Workshop (Geneva, 9-10 December 2008) (COM 17-TD 0037). As you will remember, our group has produced the ASN.1 specification which is equivalent to the XML Schema for CAP in order to permit an efficient binary encoding.

We have been particularly interested in sections 6.2 "Making globally unique identifiers for CAP alerts" and 8.1 "Unique identifiers for events."

Object Identifiers (OIDs) as defined in ITU-T X.660 (see http://www.itu.int/ITU-T/studygroups/com17/oid.html) are a candidate for the unique identification of (disaster) events and related information.

The structure of GLIDE numbers could easily be represented as an OID (ITU-T X.660 makes use of the country codes defined in ISO/IEC 3166).

The hierarchical nature of the OID tree would automatically avoid identifier collision.

The International OID tree provides unambiguous identification of arcs using any Unicode characters (and thus any human language). This satisfies your requirement for ease of reading by humans.

More information on OIDs can be found at http://www.oid-info.com

Q.12/17 also has expertise in the specification of standards that define the rules for registration authorities and as such, we could help in relation to section 7.2 of the report ("Having an internationally agreed list of authorities for common types of CAP alerts").

We are very interested in being involved in action 9.3 of the report of the CAP Implementers Workshop ("Elysa Jones will ask the OASIS EM TC to explore the possibility of preparing a 'white paper' on the topic of globally unique identifiers for CAP alerts") and we are looking forward to cooperating with you in producing this white paper.

_____

INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION STANDARDIZATION SECTOR

STUDY PERIOD 2009-2012

STUDY GROUP 2

TD 95 (PLEN/2)

English only

Original: English

Question(s): 1/2 Geneva, 16-24 November 2009

TEMPORARY DOCUMENT

(Ref. : COM 2 – LS 35 – E)

Source: Rapporteur, Q.1/2

Title: Liaison to WMO on seeking views on the feasibility of message identifier global harmonization (sent on 8 June 2009)

LIAISON STATEMENT

For action to: **WMO**

For comment to:

For information to: **ITU-T SG17**

Approval:

Deadline: **November 2009**

Contact: Gary Richenaker Tel: +1 571 294 1760
USA Email: gary.richenaker@neustar.biz

Please don't change the structure of this table, just insert the necessary information.

ITU-T SG2, the lead ITU-T Study Group for Service definition, numbering and routing, the lead ITU-T Study Group on telecommunications for disaster relief/early warning has had brought to its attention the forthcoming meeting of the WMO in relation to Common Alerting Protocol. ITU-T SG2 is currently studying the administration of address space for civic purposes in the point-to-multipoint or multicast or broadcast bearer services of commercial mobile services and acknowledges that this is critical to support the deployment of warning and informing the public, as mobile networks support a large number of 'Roamers', many of whom may be from another country entirely. Accordingly, during the discussions in ITU-T SG2 meeting held in March 2009, it was agreed that the harmonization of message identifiers for the purpose of emergency alerting and for civic purposes is significant, and in addition to the identifier element ITU-T SG2 began development of a service Recommendation on requirements for land mobile alerting broadcast capabilities for civic purposes (The current draft is attached).

ITU-T SG2 believes CAP (Common Alerting Protocol) to be a simple and general format for emergency alerting and public warning, and as such it is a very general and high level alerting requirement. The implementation of CAP will need the support of different system technologies, e.g., GSM, UMTS and CDMA etc.. Identifiers such as "sender", "source" in CAP messages might be ultimately mapped to different parameters in different system technologies, e.g., Message Identifier in GSM and UMTS system technologies, Service Category in IS95 CDMA system technologies. Hence, it is considered that the value of some identifiers, such as "sender", "source" and "language" element in Alert message in CAP implementation may also have the potential

demand for some degree of global harmonization, which could be much related to the ongoing study in ITU-T SG2 identified above.

Noting that WMO will host a CAP implementation workshop on identifiers, we would like to take advantage to seek views from the workshop on the feasibility of global harmonization of the value for “sender”, “source” and “language" element in CAP Alert message. ITU-T SG2 would appreciate receiving your response on this issue and being kept informed of the progress of WMO study on identifiers in CAP implementation. If there is any comment on the draft recommendation E.abc from WMO or the workshop, we would also appreciate it.

Draft ITU-T Recommandation E.abc

Requirements for Land Mobile Alerting Broadcast Capabilities for Civic Purposes.

Summary

This recommendation describes requirements to enable the use of Land Mobile services for point-to-multipoint, Multicast and Broadcast capabilities for civic purposes, including but not limited to, warning and informing the public, at the discretion of the concerned Member State.

1. Introduction

A disaster is a hazard multiplied by the vulnerability.

Many national, regional, and international studies have shown that by enabling warning and informing the public by all means, including, but not limited to, mobile telephone services, vulnerability can be dramatically reduced and thus save lives and reduce the cost of damage to property. The issues associated with the deployment of warning and informing the public over mobile telephone networks in the case of emergencies and disasters is under way in a number of Member States.

Such capabilities within commercial mobile services is critical to support the deployment of warning and informing the public, as mobile networks support a large number of 'Roamers', who may be from another country entirely. Accordingly the purpose of this Recommendation is to ensure that a consistent approach is taken to enable;

- Warnings to be received by subscribers in a given area (both residents and roamers),
- The transmission of such warnings in multiple languages and
- Prevention of spamming from occurring on addresses suggested as for civic purposes.

This framework will not inhibit Administrations from developing any technical solution that it sees fit. As further bearer services become relevant, the capabilities described in the Recommendation may or may not act as a guideline for the deployment within other bearer services and technologies.

1 Scope

This Recommendation proposes a set of capabilities to be provided when broadcasting alerts to subscribers of commercial mobile services.

2 References

The following ITU-T Recommendations and other references contain provisions, which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

3 Definitions

Cell Broadcasting; The point-to-multipoint bearer service of GSM and UMTS system technologies.

Other definitions are for further study.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

GSM Global System for Mobile communications

CDMA Code Division Multiple Access

5. Initial capabilities for Alert Messaging

The following capabilities should be provided and should apply to both GSM and CDMA technologies.

5.1 Alert Messages

An alert message is one component in an overall effective notification system. An alert is designed to get the attention of the subscriber and not a full source of information. An alert message is to be used when there is an imminent threat to life or property. It is required that the terminal (e.g. phone) should make a more intrusive and persistent behaviour, such as a special alert tone resembling an alert siren. Depending on national requirements, there could be multiple classes of alerts based on severity, certainty, and urgency of the alert. Subscribers could be offered the option to opt out of some classes of these alerts, based on national regulatory requirements.

5.2 Advisory Messages

'Advisory' messages may be provided and are intended for less urgent civic communications. Transmission of these should be subject to national regulatory requirements as well as operator preferences. Subscribers should have the ability to opt in or opt out of civic messages since they are more of an advisory nature and are not matters of urgent life and death situations, or matters of national security. In addition, a purely advisory message need only use the normal alert ring tone from the terminal and not the more obtrusive one as used for alerts.

5.3 Languages

To the extent practicable, and subject to national regulatory requirements, messages may be delivered to the user in the user's preferred language. [How a user's preference should be specified and how many languages need be supported is for discussion.]

5.4 ‘Mandatory’ National Civic Messages

In some Member States, legislation requires that a message pertaining to national security might be mandatory rather than optional for the citizen. Terminal users should not be able to disable these messages.

5.5 ‘International’ closed user group

Certain messages may be communications destined to ‘closed user groups’ of specialists and not for communication to the public. Warning and informing the public is strictly a national matter.

In some cases users may need the same address for all countries. For example, a small boat skipper who is not mandated to have the official GMDSS equipment, may have a mobile phone in his possession or mounted in the wheelhouse. The sailor would want navigation warnings on the same address whatever coast he passed.

There may be a need for Member States to relay onto first responders or other specialized personnel messages from certain international agencies (for example, for health or medical alerts). For example, health and medicine might need closed user group communications to medical specialists who may be dealing with a situation such as an outbreak of avian flu. However these communications would be controlled by the concerned national agency within each Member State, not by any international entity. An international agency (such as the World Health Organization) might provide messages to Member States, if so requested. The Member State would then decide whether or not to transmit them to the closed user group, and would control the membership of that closed user group.

This capability could also include special ‘technical test’ addresses for management of the system without causing any interference to the users of the network concerned. In this way customers of the network are not bothered by periodic tests and other trouble shooting activity.

_____