

ENUM Activities in AP Region

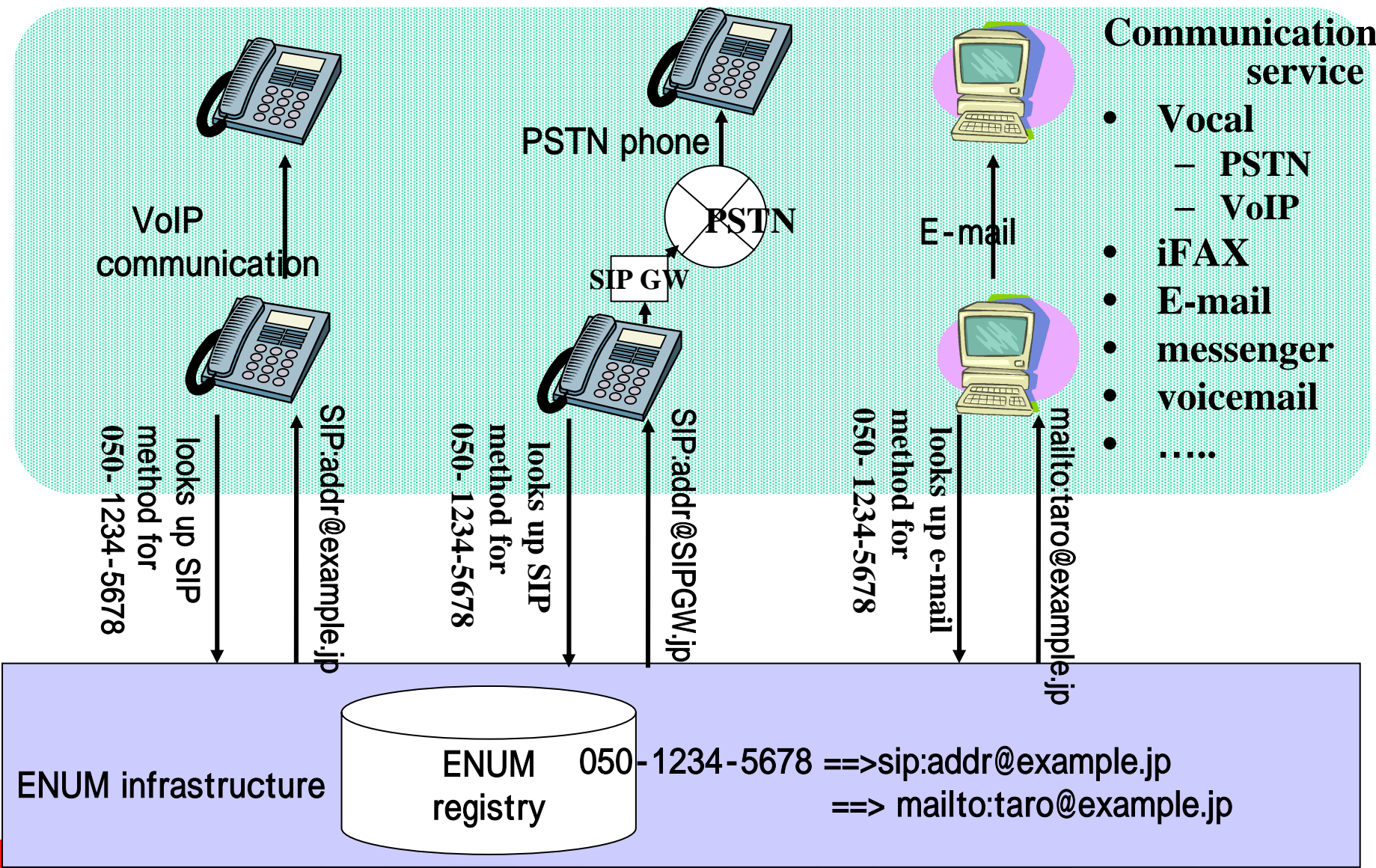
**AP* Retreat
Cairns, Australia**

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What is ENUM?

- **ENUM is a mechanism for mapping telephone (E.164) numbers to Internet resource address(es)**
 - 1 to many
- **Internet resource address(es) are specified as URI(s).**
- **Mapping is**
 - Registered using NAPTR records in DNS
 - referred to by DNS lookup
- **End users (Applications) can select URI(s) according to their preference**

What is ENUM used for?

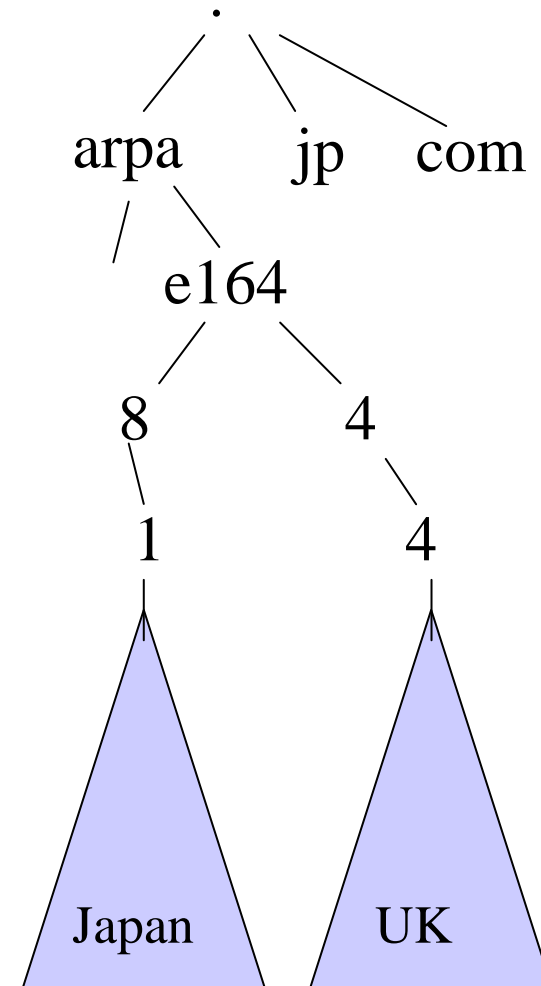


Communication service

- **Vocal**
 - PSTN
 - VoIP
- **iFAX**
- **E-mail**
- **messenger**
- **voicemail**
- **....**

What is Delegation?

- **Delegation of a Telephone number space for ENUM Trial**
 - Telephone numbers under a country code (ex. 81 for Japan) shall be delegated to and managed by some organization authorized by the corresponding government
- **Procedure**
 - An organization negotiates with the government to become a delegee of the number space
 - The organization sends a request for delegation to RIPE NCC
 - RIPE NCC asks ITU-T for authorization to make such delegation (= NS delegation) under e164.arpa
 - ITU-T asks the corresponding government for endorsement of the delegation
 - The government endorses the delegation
 - Delegation is reflected (under e164.arpa) on DNS



Worldwide Delegees

As of June 29, 2004

E.164 Country Code	Country	Delegee	Date of TSB Approval dd/mm/yy
246	Diego Garcia	Government	12/08/02
247	Ascension	Government	12/08/02
290	Saint Helena	Government	12/08/02
31	Netherlands	Ministry	23/05/02
33	France	DiGITIP (Government)	28/03/03
353	Ireland (e)	Commission for Communications Regulation	25/05/04
358	Finland	Finnish Communications Regulatory Authority	26/02/03
36	Hungary	CHIP/ISzT	15/07/02
374	Armenia	Arminco Ltd	11/07/03
40	Romania	MinCom	10/12/02
41	Switzerland	OFCOM	01/10/03

Worldwide Delegees - continued

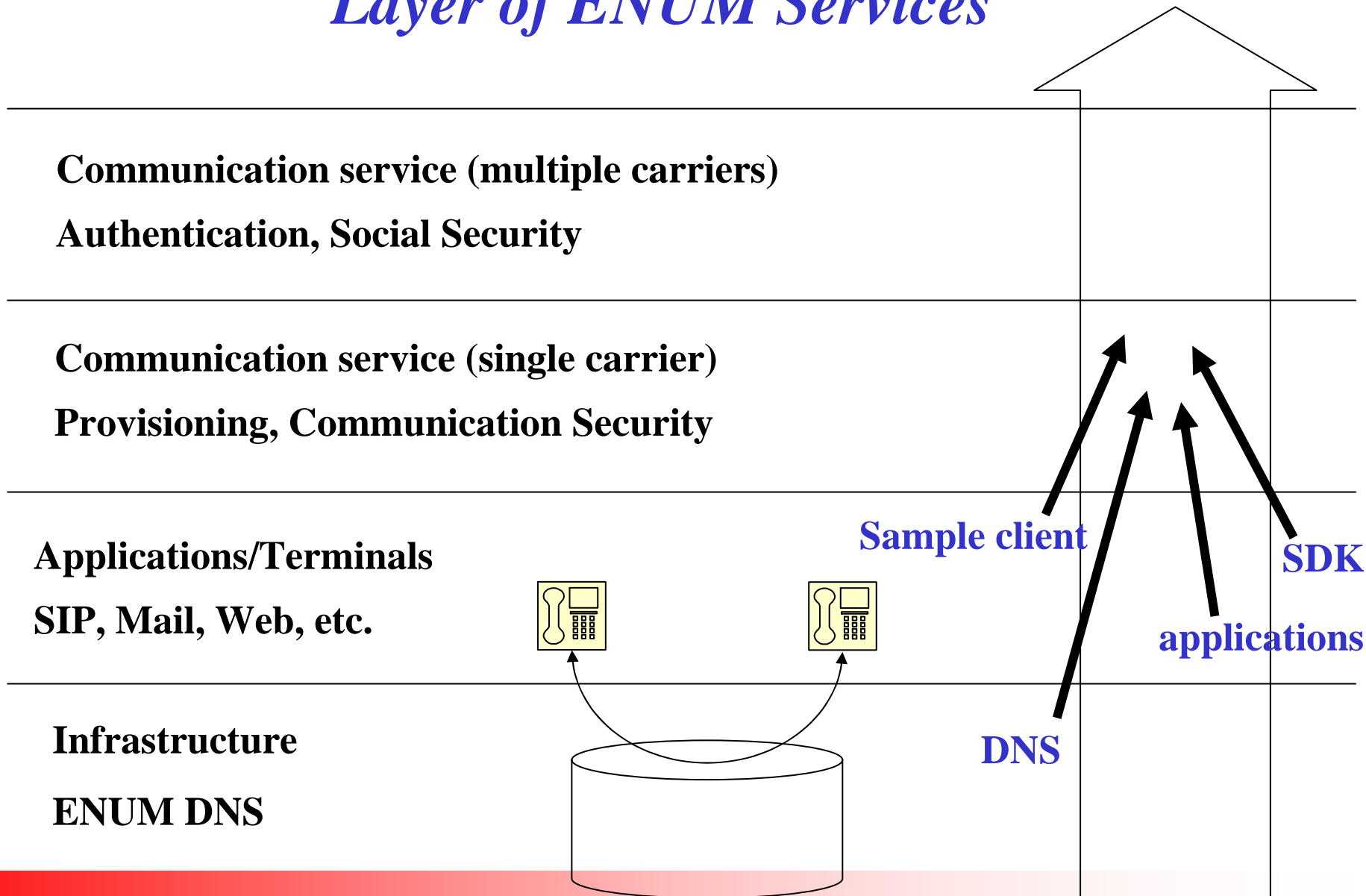
E.164 Country Code	Country	Delegee	Date of TSB Approval dd/mm/yy
420	Czech Republic	Ministry of Informatics	24/06/03
421	Slovak Republic	Ministry of Transport, Post, and Telecommunications	04/06/03
423	Liechtenstein	SWITCH	21/10/03
43	Austria	Regulator	11/06/02
44	UK	DTI/Nominum	16/05/02
46	Sweden	NPTA	10/12/02
48	Poland	NASK	18/07/02
49	Germany	DENIC	16/05/02
55	Brazil	Brazilian Internet Registry	19/07/02
65	Singapore	IDA (Government)	04/06/03
86	China (c)	CNNIC	02/09/02
878 10	(a)	VISIONg	16/05/02
971	United Arab Emirates	Etisalat	13/01/03
882 34	(d)	Global Networks Switzerland AG	05/03/04

Worldwide Delegees - notes

Notes:

- (a) This is a Universal Personal Telephony (UPT) code.**
- (b) DELETED, referred to 991 001 which is no longer assigned or delegated for ENUM.**
- (c) This is a temporary authorization for ENUM global TLD trial and evaluation. This delegation will end on 30 June 2005. If the ITU Interim Procedure is discontinued before then, or if the Recommendation E.A-ENUM is approved before 30 June 2005, the delegation will be turned into an objection.**
- (d) This is a country code and associated identification code for Networks (shared country code).**
- (e) This delegation will end on 30 March 2005.**

Layer of ENUM Services



Past Activities in AP region - APRICOT -

- **APRICOT 2003 (Feb. 26, 2003 @ Taipei)**
 - **Past, present and future development of ENUM in perspective regions**
 - Neustar
 - Korea Network Information Center (KRNIC), Korea
 - Taiwan Network Information Center (TWNIC), Taiwan
 - Japan Registry Service Co., Ltd. (JPRS), Japan
 - **Introduction of activities**
- **APRICOT 2004 (Feb. 25, 2004 @ Kuala Lumpur)**
 - **Enum / SIP BoF**
 - China Network Information Center (CNNIC), China
 - Japan Registry Service Co., Ltd. (JPRS), Japan
 - Korea Network Information Center (KRNIC), Korea
 - Taiwan Network Information Center (TWNIC), Taiwan
 - Infocomm Development Authority (IDA), Singapore
 - **Introduction of activities / cooperation in AP region**

Past Activities in AP Region - APT-ITU Workshop -

- **Aug. 15, 2003 @ Bangkok**
 - SIEMENS AG
 - Australian Communications Authority (ACA), Australia
 - International Telecommunication Union (ITU)
 - Korea Network Information Center (KRNIC), Korea
 - Ministry of Public Management Home Affairs, Posts and Telecommunications (MPHPT) & Japan Registry Service (JPRS), Japan
- **May 22, 2004 @ Bandar Seri Begawan**
 - IETF ENUM WG Co-Chair
 - International Telecommunication Union (ITU)
 - Australian Communications Authority (AC), Australia
 - Ministry of Information Industry, China
 - Korea Network Information Center (KRNIC), Korea
 - OEFEG, Austria
 - Japan Registry Service Co., Ltd. (JPRS), Japan
 - Infocomm Development Authority (IDA), Singapore

APEET (Asia pacific ENUM Engineering Team)

- **Charter**

- **APEET is a project team with no formal entity**
- **APEET engineers are supported by their respective organizations**
- **The cost for the collaborations are voluntarily supported by the participating organizations**
- **APEET will be dissolved if and when the project has been terminated**

- **Membership**

- **Initial members**
 - **CNNIC, JPRS, KRNIC, SGNIC, TWNIC**
- **Qualification**
 - **ccTLD administrators (or its designated representatives)**
 - **NO objections from existing APEET members**
- **Vendors and others can join the ENUM trial organizations in each country/region.**
- **individual experts are invited to participate the meeting**

APEET – continued(1)

- **Objectives**
 - **APEET members may conduct some ENUM/SIP trials**
 - **APEET members may share ENUM software**
 - **APEET members share the common "golden root" APENUM.ORG for the trials**
 - **APEET members will do ENUM/SIP outreach activities, such as ENUM/SIP workshop and live trial at APRICOT 2005, etc.**
- **Composition of the APENUM.ORG**
 - **APENUM.ORG will be jointly hosted by its members and relevant organizations**
 - **with help of APNIC**
 - **The numbers APEET assigns under APENUM.ORG are NOT E.164 (Phone) numbers. They are identifiers for the use of the technical trials only**
 - **Each APEET member is entitled to choose a number of their choice as a prefix of its ENUM numbers**

APEET – continued(2)

- **Milestones**

- **Jul 04 ?**

- **Public announcement of the formation of APEET**

- **16 Jul 04**

- **1st APEET meeting at Singapore**
 - **Venue: SGNIC, Proof of Concept Lab.**

- **Aug 04**

- **Interim technical meeting at San Diego (during IETF)**

- **Nov 04**

- **Interim technical meeting (during IETF)**

- **Feb 05**

- **2nd APEET meeting at Kyoto (during APRICOT 2005)**
- **Full day ENUM/SIP track**
- **ENUM/SIP live trial**

Current Members

- **SGNIC**
 - James Seng
 - Tan Yeow Hui
 - Dickson Loh
- **CNNIC**
 - Xiaodong(Sheldon) LEE
 - Hui CHEN
 - Hongguan WEN
- **JPRS**
 - Yoshiro Yoneya
 - Hiro Hotta
- **KRNIC**
 - Sungwoo Shin
 - Jung-Jung Na
 - Jeong-Hyun Lee
- **TWNIC**
 - Ai-Chin Lu
 - Nai-Wen Hsu
 - Ching Chiao

ENUM and VoIP Track at APRICOT 2005

- **goal is** (being proposed)
 - **To educate participants on**
 - **ENUM and SIP basic concepts**
 - **the underlying technologies**
 - **potential applications**
 - **deployment status in Asia Pacific.**
 - **To share information and experiences**
 - **To discuss common problems and solutions**
 - **To find areas of collaborations**
- **Draft Agenda**
 - **Session 1 - Introduction to IP Telephony**
 - **Session 2 - IP Telephony Deployment**
 - **Session 3 - ENUM/SIP Deployment Status**
- **Expected Audience and Attendees**
 - **network engineers from ISPs, telcos and NICs**
 - **VoIP vendors, service providers and hardware/equipment manufacturers**
 - **government officials and policy makers**
 - **individuals interested in ENUM and VoIP development in Asia Pacific**

References

- **APEET**
 - <http://www.apenum.org/>
- **APRICOT**
 - **2003**
 - <http://www.apricot.net/apricot2003/index.htm>
 - **2004**
 - <http://www.apricot.net/apricot2004/default.htm>
 - **2005**
 - <http://www.2005.apricot.net/>
- **Presentations in APT-ITU Workshop**
 - **Aug. 2003**
 - <http://www.aptsec.org/meetings/2003/workshop/default.htm>
 - **May 2004**
 - <http://www.aptsec.org/meetings/2004/ENUMIDN/default.htm>
- **Presentation in AP* Retreat**
 - **Feb. 2004**
 - <http://www.apstar.org/kl/040222ENUMatAPSTAR.ppt>