

Activities and Status in Japan

- ENUM -

APT-ITU Joint Workshop on ENUM and IDN
May 21, 2004 @Brunei

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Who is JPRS

<http://jprs.jp/en>

- **Established**
 - **December 2000**
 - **ccTLD registry for .JP**
 - **ccTLD registry function completely delegated to JPRS in April 2002**
- **Features**
 - **Private, for-profit company**
 - **Endorsed by Japanese Government as .JP registry**
 - **Contract with ICANN**
 - **Registry activities overseen by Japan Network Information Center (JPNIC) and Japanese Government**
 - **Satisfaction of public interests through public comment, Advisory Committee, community consultation, ...**

*** Japanese Government = Ministry of Public Management, Home Affairs, Posts and Telecoms (MPHPT)**

ENUM Study Group

- **Established** <http://www.nic.ad.jp/en/enum/index.html>
 - September 2002
 - Initiatives by the private sector
- **Objectives**
 - Understanding the **ENUM** technology : desk work
 - Studying the implementation and operation of the **ENUM**-based system, and related matters
 - Finding political/regulatory issues related to **ENUM**-based implementation and operation
 - Finding technological issues related to **ENUM**
 - Clarifying pros and cons in **ENUM** usage
- **Final report**
 - Published in May 2003

<http://www.nic.ad.jp/en/enum/ENUMReport.pdf>

ENUM Trial Japan (ETJP)



<http://etjp.jp/english/index.html>

- **Established - 17 September 2003 (1 year activity)**
 - Initiatives by the private sector
- **Purpose**
 - Ensure functioning and feasibility of basic technical facility
 - Demonstrate technology for international use
 - Accumulate and share know-how about ENUM
 - DNS operation for ENUM Trial
 - Feasibility test of communication applications (device, software) using ENUM
 - Feasibility test of communication services
- **Results**
 - Technical verification
 - Communication devices and software provided by participants
 - Communication services
 - Clarification and consideration of relevant issues

ETJP organization

- **Participants**
 - **Companies, organizations, and individuals who hope to contribute to ETJP activities**
 - **Number of members: 43 (as of May 21, 2004)**
 - **Telecom operators** **7**
 - **ISPs** **5**
 - **Vendors** **14**
 - **Domain name registries/registrars** **6**
 - **Others** **11**

ETJP organization

- **Officers**

- **Chairman**

- **Shigeki Goto**

**Japan Network Information
Center (JPNIC) /
Waseda University**

- **Vice chairman**

- **Hirofumi Hotta**

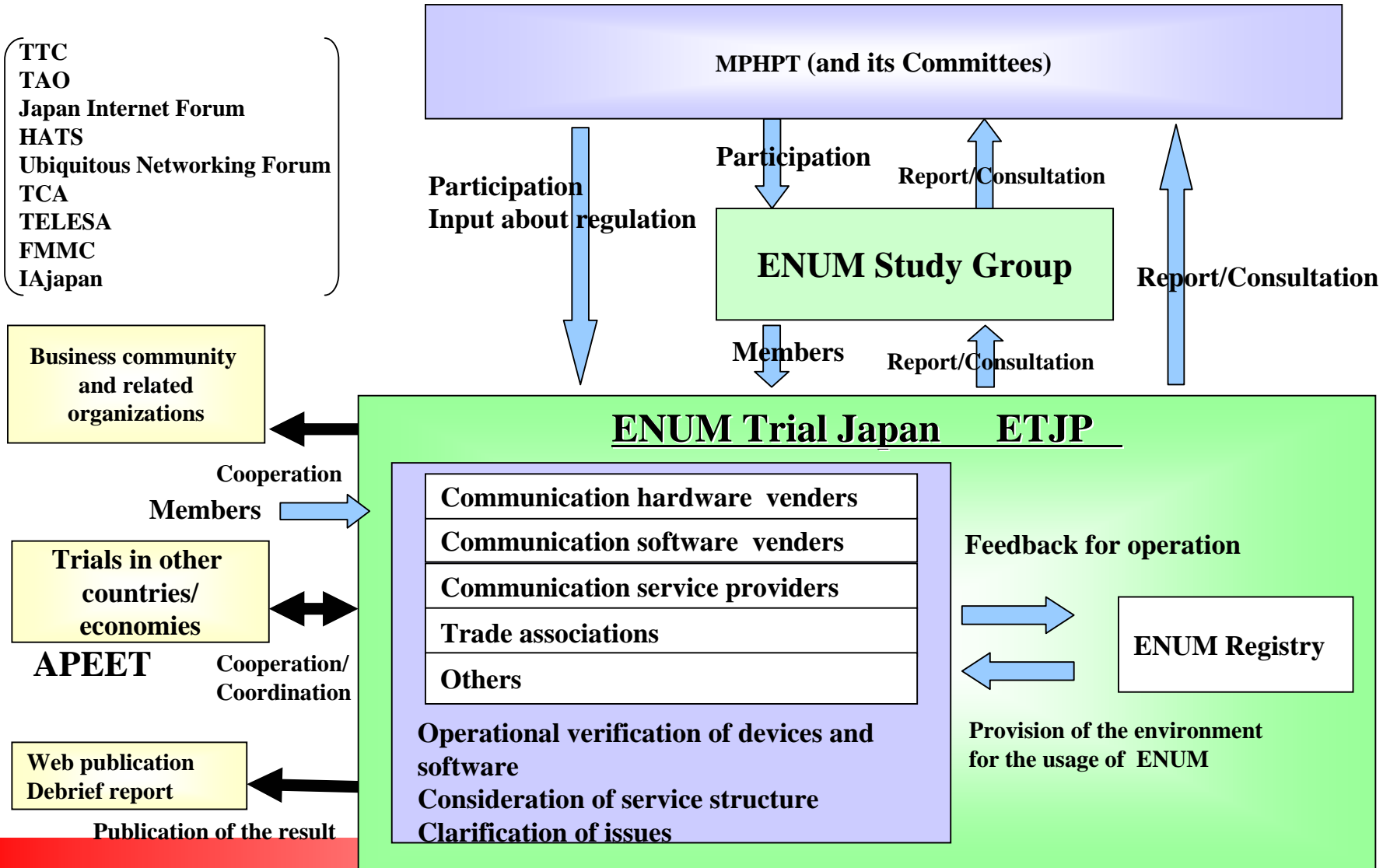
**Japan Registry Service Co., Ltd.
(JPRS)**

- **Yoshiki Ishida**

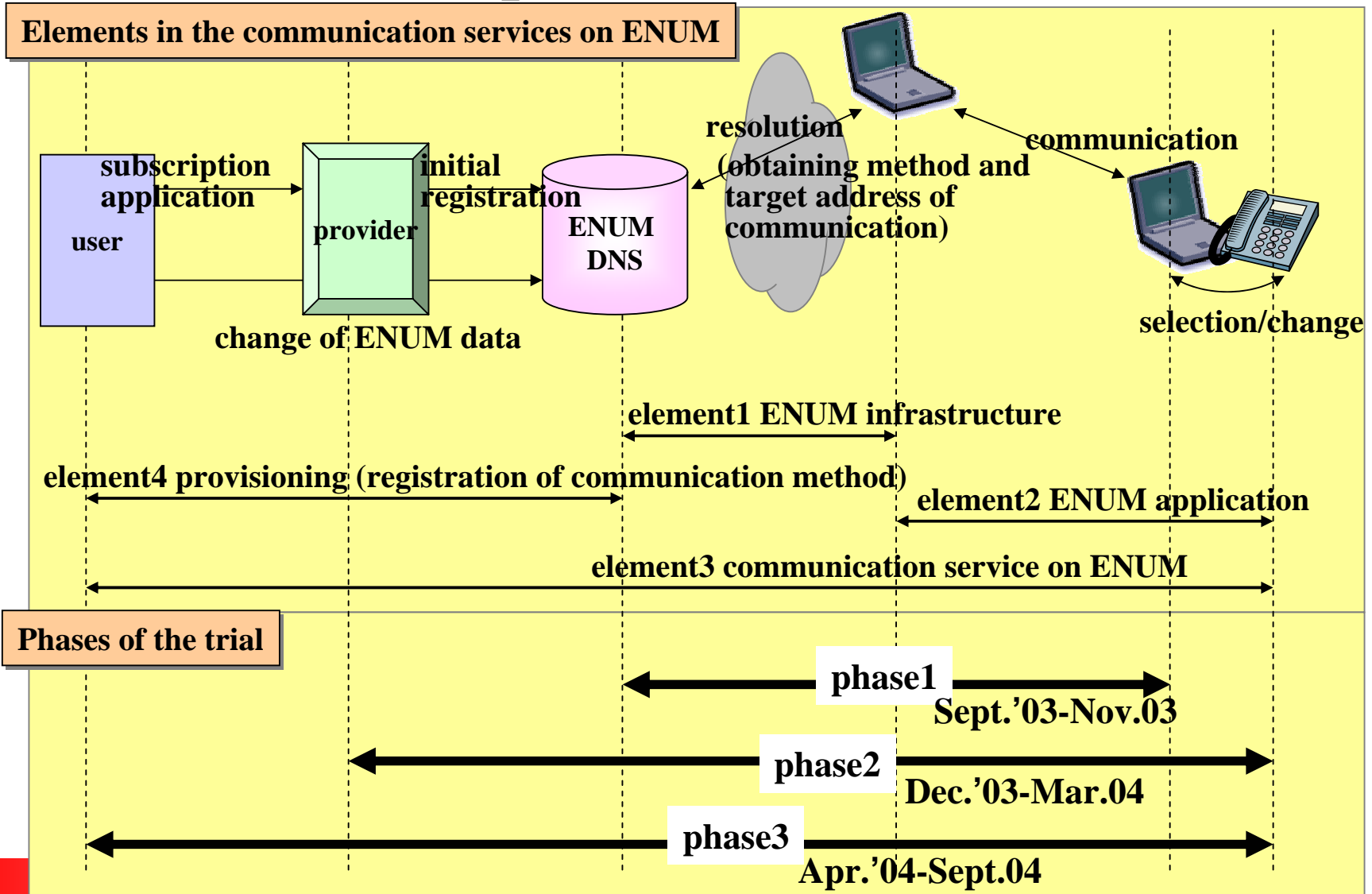
WIDE Project



ETJP and related organizations



ETJP phases and schedule



Meetings

- **Sept. 2003**
 - Establishment with 20 members
 - Small demonstrations
- **Oct. 2003**
 - Demonstrations by vendors (CISCO, Softfront, Panasonic, YAMAHA)
- **Dec. 2003**
 - Introduction of oversea trials (including Austria trial presentation)
- **Jan. 2004**
 - Demonstrations of SDK for application and sample application
 - Korea trial presentation
- **Mar. 2004**
 - DNSSEC experiment proposal
- **May 2004**
 - Intermediate report and public conference



Dec. 2003



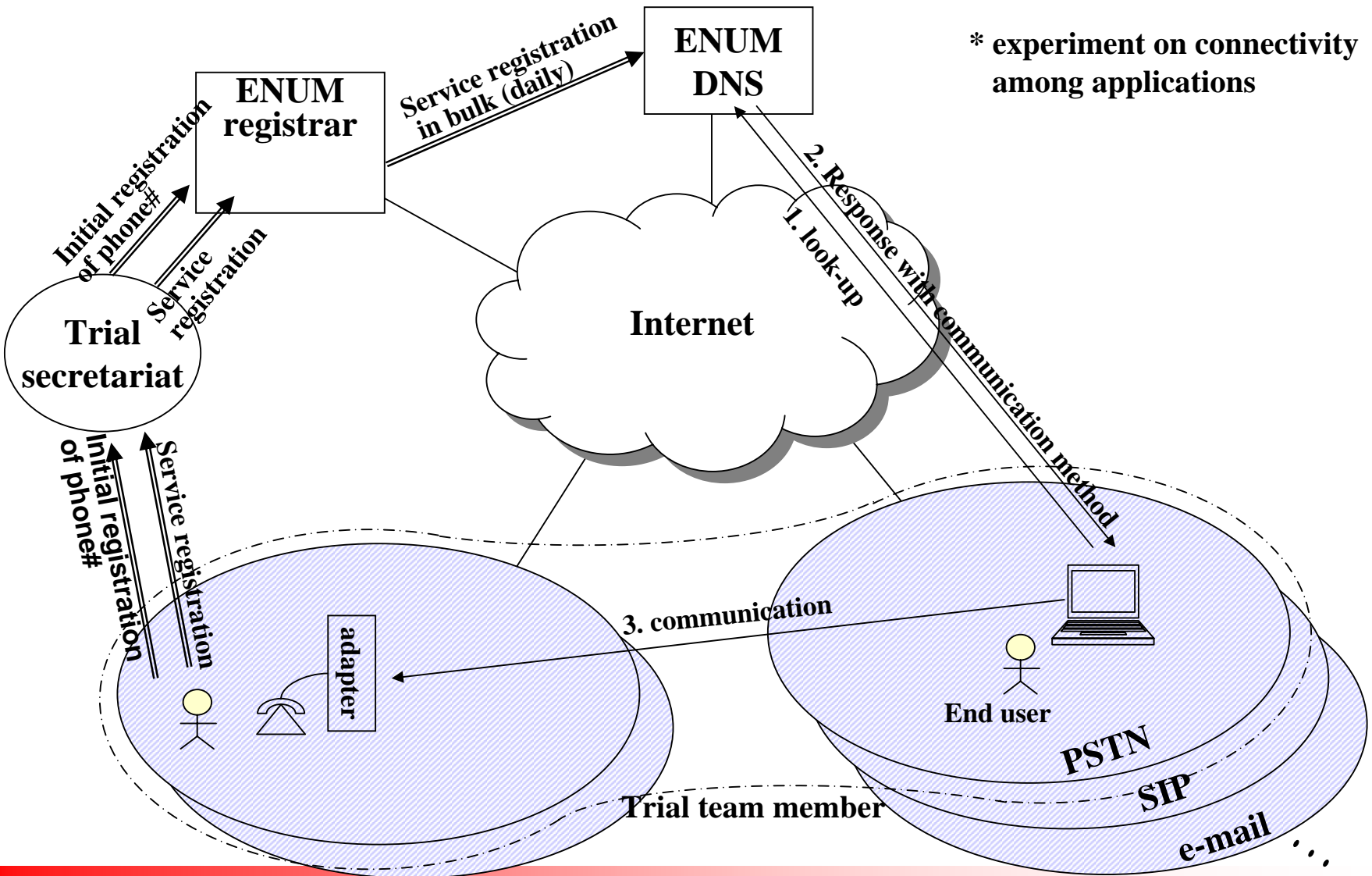
May 2004

ETJP Working Groups

- **Privacy and Security WG**
 - **Objective**
 - **Discuss data treatment policy in each phase of trial and then publish guidelines**
 - **Milestone**
 - **Jan 2004: First draft, request for comments**
 - **June 2004: guideline published**
- **DNS WG**
 - **Objective**
 - **Define possible ENUM DNS models in Japan, their requirements and evaluation criteria, then evaluate current DNS implementations**
 - **Study the application of DNSSEC to ENUM**
 - **Milestone**
 - **Mar 2004: Registry system with DNSSEC**
 - **Mar 2004: Definition of model and requirements**
 - **June 2004: Testbed, evaluation**
 - **Sept 2004: Reports published on the DNS performance and DNSSEC**

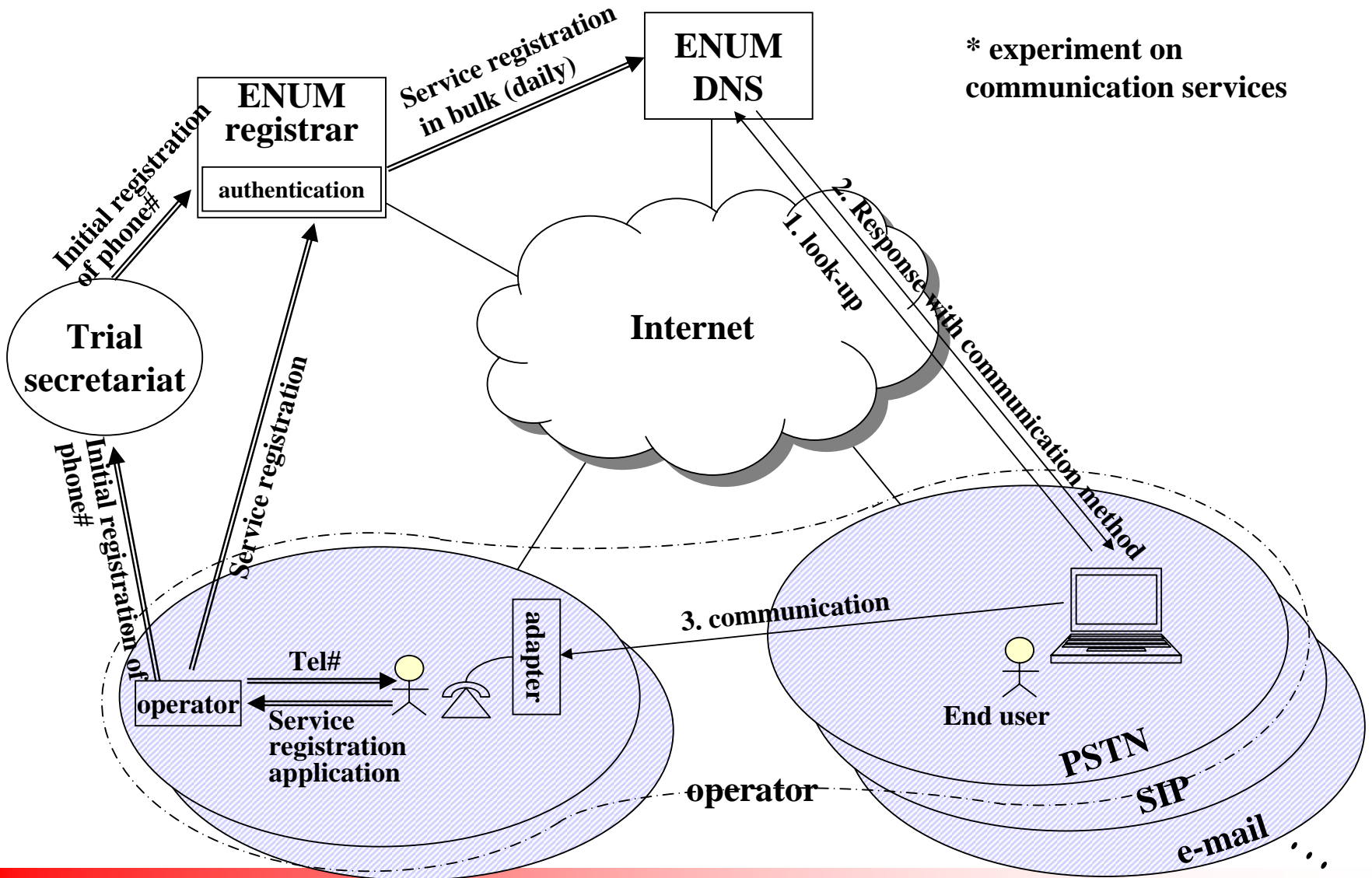
ENUM trial (phase1)

* experiment on connectivity among applications

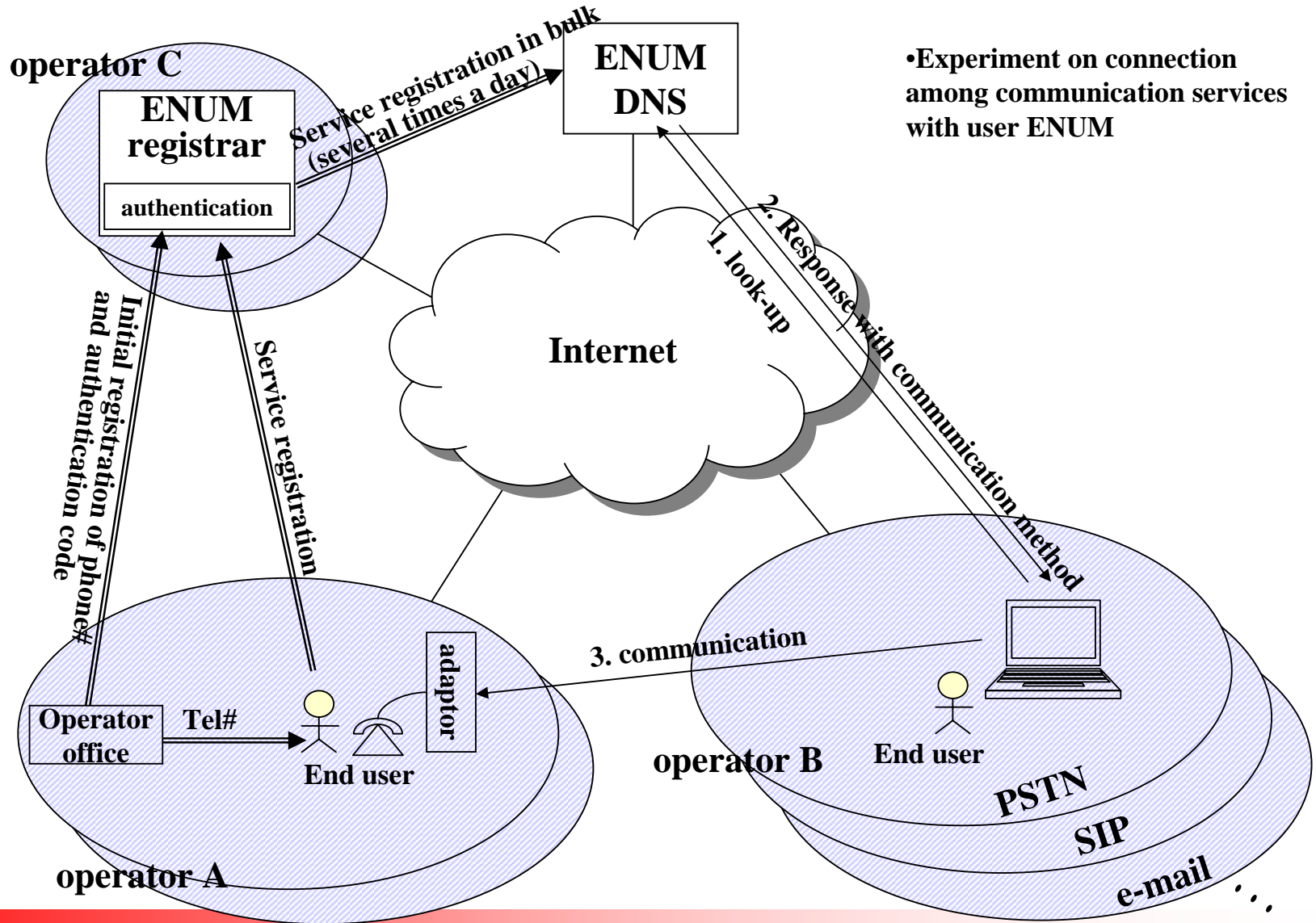


ENUM trial (phase2)

* experiment on communication services



ENUM trial (phase3)



•Experiment on connection among communication services with user ENUM

ETJP Registration system (Phase 1)

- **Each ETJP member can apply their preferred numbers as their trial E.164 numbers**
- **Verification is performed by each member's ID and password**

ETJP applications (Phase 1)

- **ENUM enabled SIP Proxy (Softfront)**
- **ENUM enabled VoIP Router (Yamaha, CISCO)**
- **ENUM enabled InternetFAX (Panasonic)**
- **Sample Software ENUM Client (JPRS)**
 - Available for the members
 - Object codes of runtime libraries used by the sample software are open to the members
 - API (under development)
 - **SetDNS** : specifies the DNS server
 - **SetAUS** : specifies the Telephone Number
 - **CreateAUS** : create the AUS Number using the locale info
 - **ENUMQuery** : look-up NAPTR records
 - **ENUMGetData** : picks up NAPTR records one by one
 -

ETJP Registration system (Phase 1)

- **Each ETJP member can apply numbers of E.164 format**
 - These numbers are not used in the real world
- **Each ETJP member can choose NS or NAPTR as the DNS record for their numbers**
- **Verification is performed by each member's ID and password**

ETJP applications (Phase 2)

- **One-number called service with RFID (Japan Telecom)**
 - **Each person registers his/her phone number into ENUM DNS as his/her permanent phone number**
 - **Each person registers his/her location dynamically into ENUM DNS through the use of RFID, when he/she changes his/her location**
 - **Location = The phone number/other communication means associated with the location**

Layer of ENUM services and standards

phase3

Communication service (multiple carriers)

Authentication, Social Security

phase2

Communication service (single carrier)

Provisioning, Communication Security

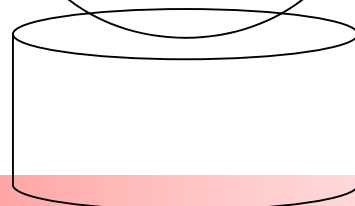
phase1

Applications/Terminals

SIP, Mail, Web, etc.

Infrastructure

ENUM DNS

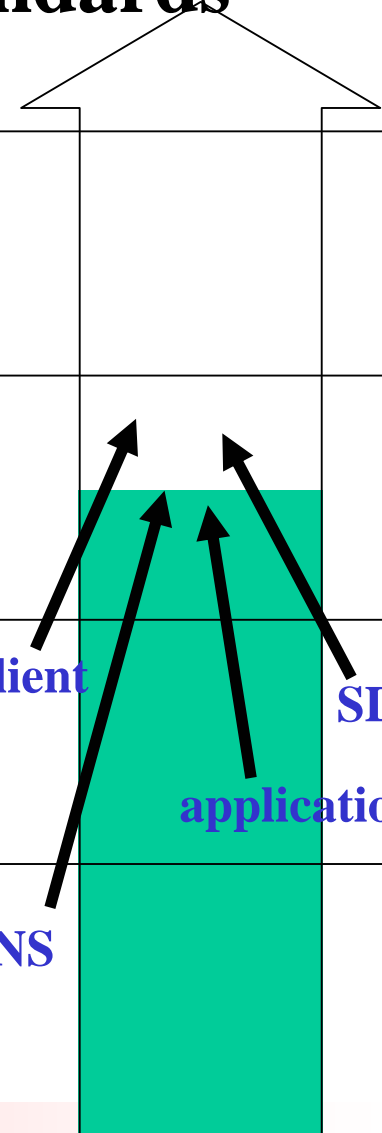


Sample client

SDK

applications

DNS



References

- **ETJP**
 - <http://etjp.jp/> (in Japanese)
 - <http://etjp.jp/english/>
- **ENUM Study Group**
 - <http://www.nic.ad.jp/en/enum/>
- **JPRS**
 - <http://jprs.co.jp/enum/> (in Japanese)