

ENUM/SIP Deployment Status - Japan Update -

**APRICOT2005 Conference
Internet Telephony (APEET)
Feb 23, 2005 @ Kyoto**

**Hiro HOTTA <<http://堀田博文.jp>>
Japan Registry Services (JPRS)**

Who is JPRS

<http://jprs.co.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)**

IP Telephone Deployment

- **Background**
 - **Rapid deployment of Broad Band environment**
 - **IP Telephone is one of service menu of ISPs**
 - **Telephone charge saving**
- **Numbering Plan**
 - **Special number assignment**
 - **050**
 - **Normal number assignment**
 - **0AB~J**
 - **Depends on service quality guarantee**
- **Recent Statistics (As of the end of Sept/2004)**
 - **Broad Band Subscribers: 17.6M**
 - **IP Telephone Subscribers: 7M**
 - **050 Assignment: 18.0M**
 - **28 ITSP**
 - **3 major groups: Softbank, NTT Communications, KDDI**

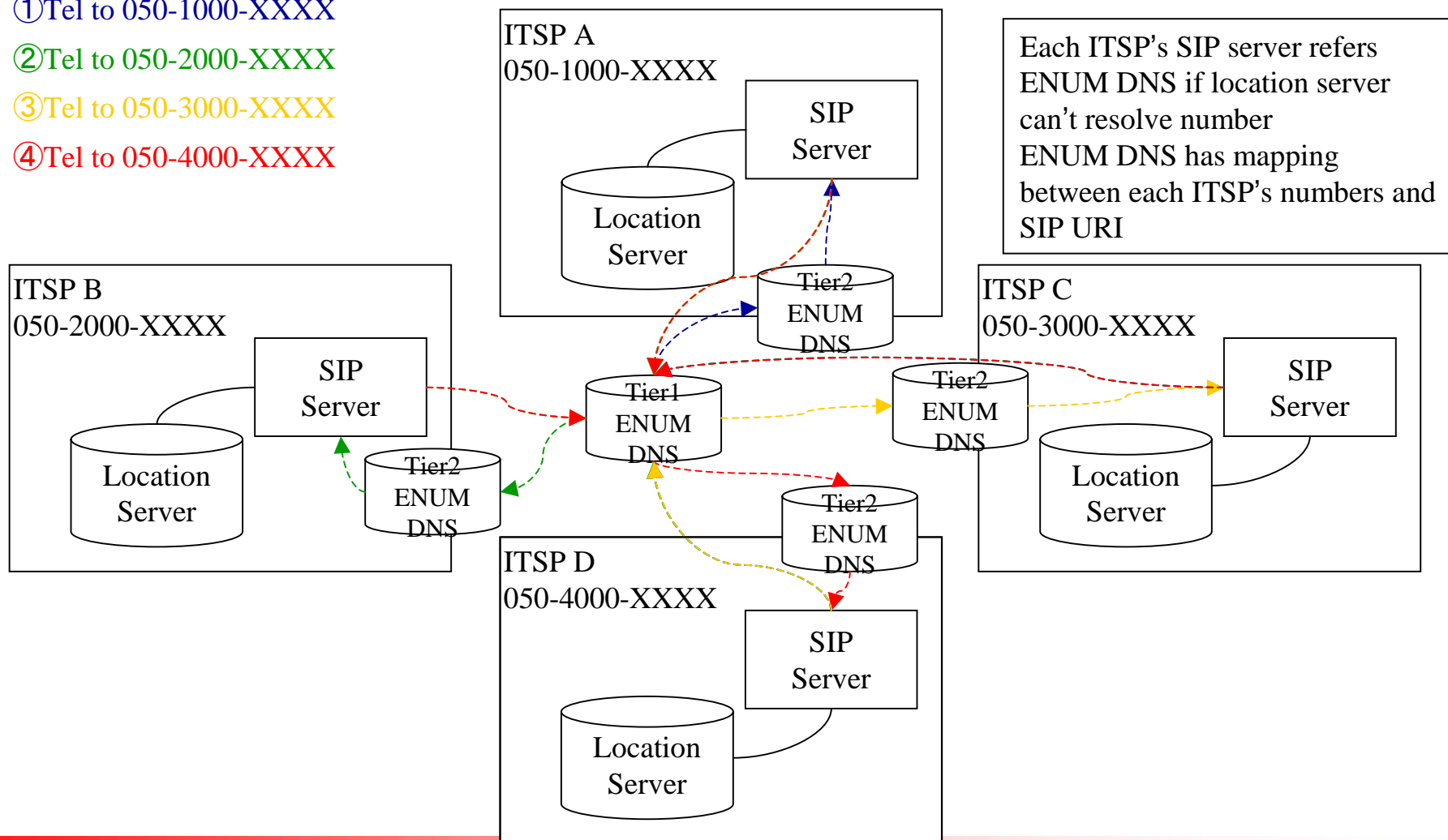
Source: http://www.soumu.go.jp/s-news/2005/050126_3.html

Issues

- **Interconnection between ITSPs**
 - **IP-IP direct connection is restricted within ITSP group**
 - **ITSP Group-ITSP Group connection is via PSTN**
- **Unresolved issues**
 - **SIP interoperability**
 - **Established “VoIP System Interoperability Task Force” on Dec 2004**
 - **<http://www.nic.ad.jp/en/topics/2004/20041201-01.html>**
 - **provider-provider interconnection test is about to start**
 - **Telephone number resolution**
 - **Leaving it to incumbent phone network (PSTN)?**
 - **Resolving it within IP network (ENUM)?**

Resolution with ENUM

- ① Tel to 050-1000-XXXX
- ② Tel to 050-2000-XXXX
- ③ Tel to 050-3000-XXXX
- ④ Tel to 050-4000-XXXX



ENUM Study Group

- **Established**
– 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/index.html>
<http://www.nic.ad.jp/en/enum/ENUMReport.pdf>

ENUM Trial Japan (ETJP)



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

- **Established - 17 September 2003**
 - 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: 45 (as of Jul 21, 2004)**
 - **Telecom operators** **7**
 - **ISPs** **5**
 - **Vendors** **15**
 - **Domain name registries/registrars** **6**
 - **Others** **12**

ETJP organization

- **Officers**

- **Chairman**

- **Shigeki Goto**

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



- **Vice chairman**

- **Hirofumi Hotta**

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

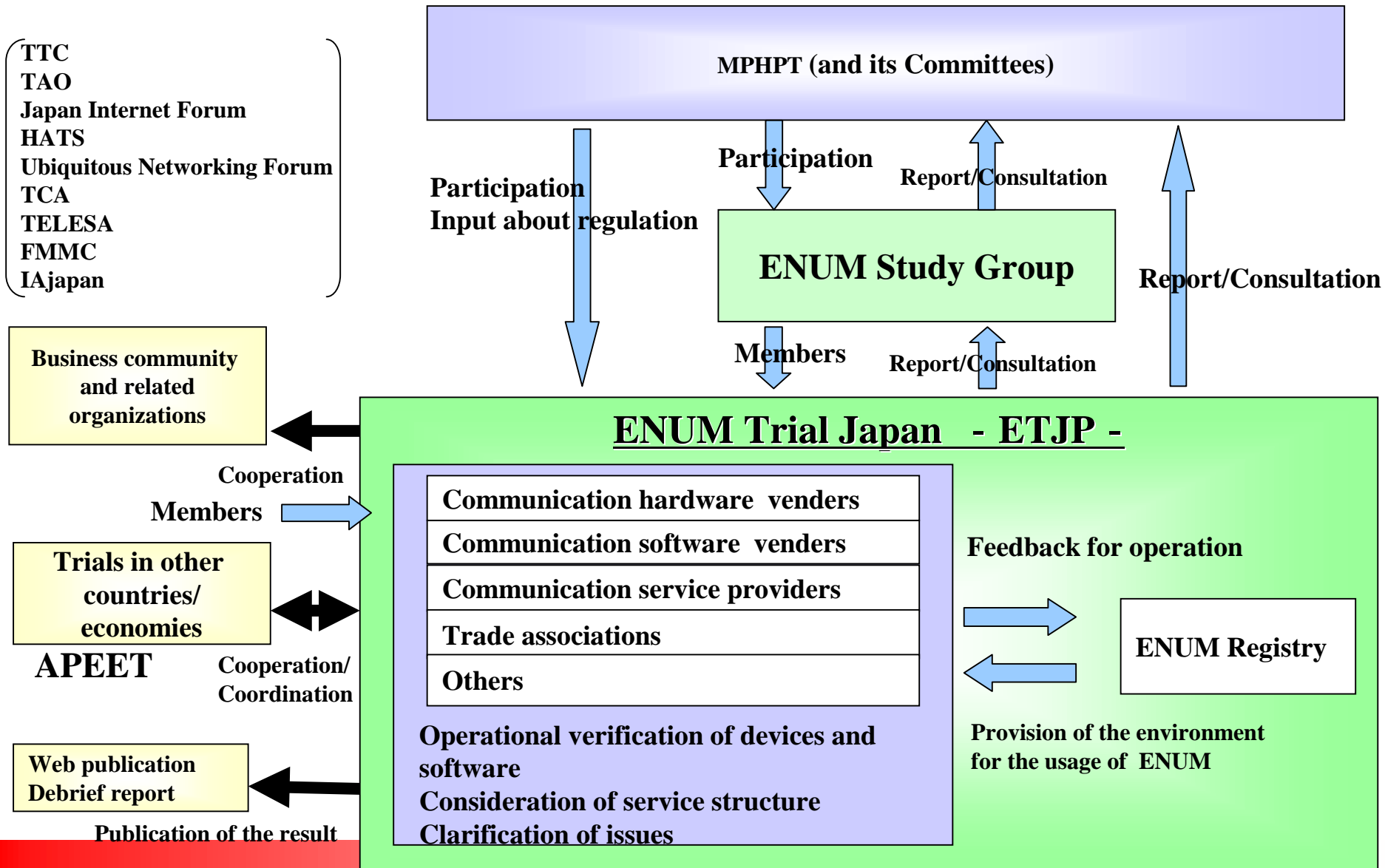


- **Yoshiki Ishida**

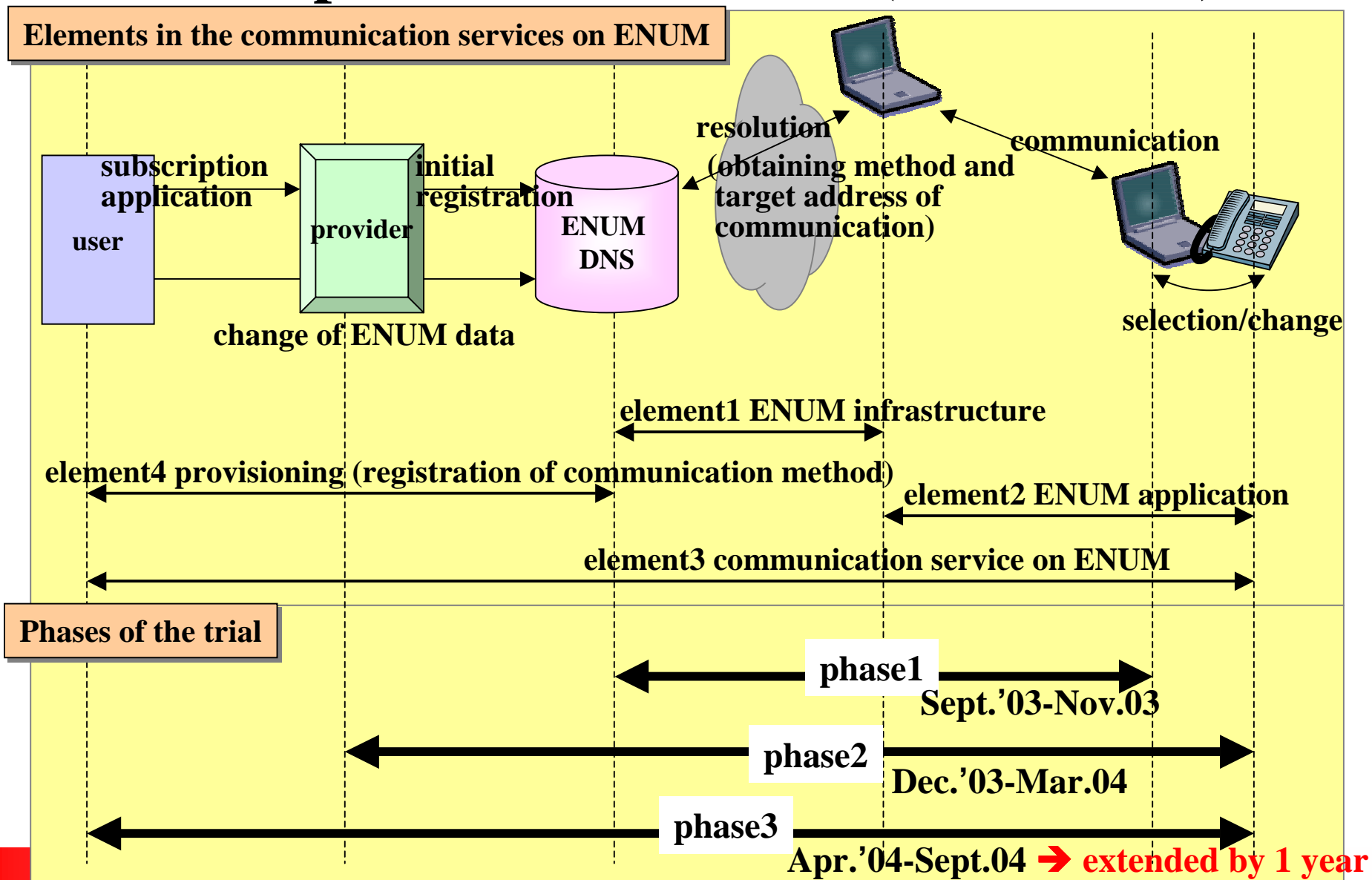
WIDE Project



ETJP and related organizations



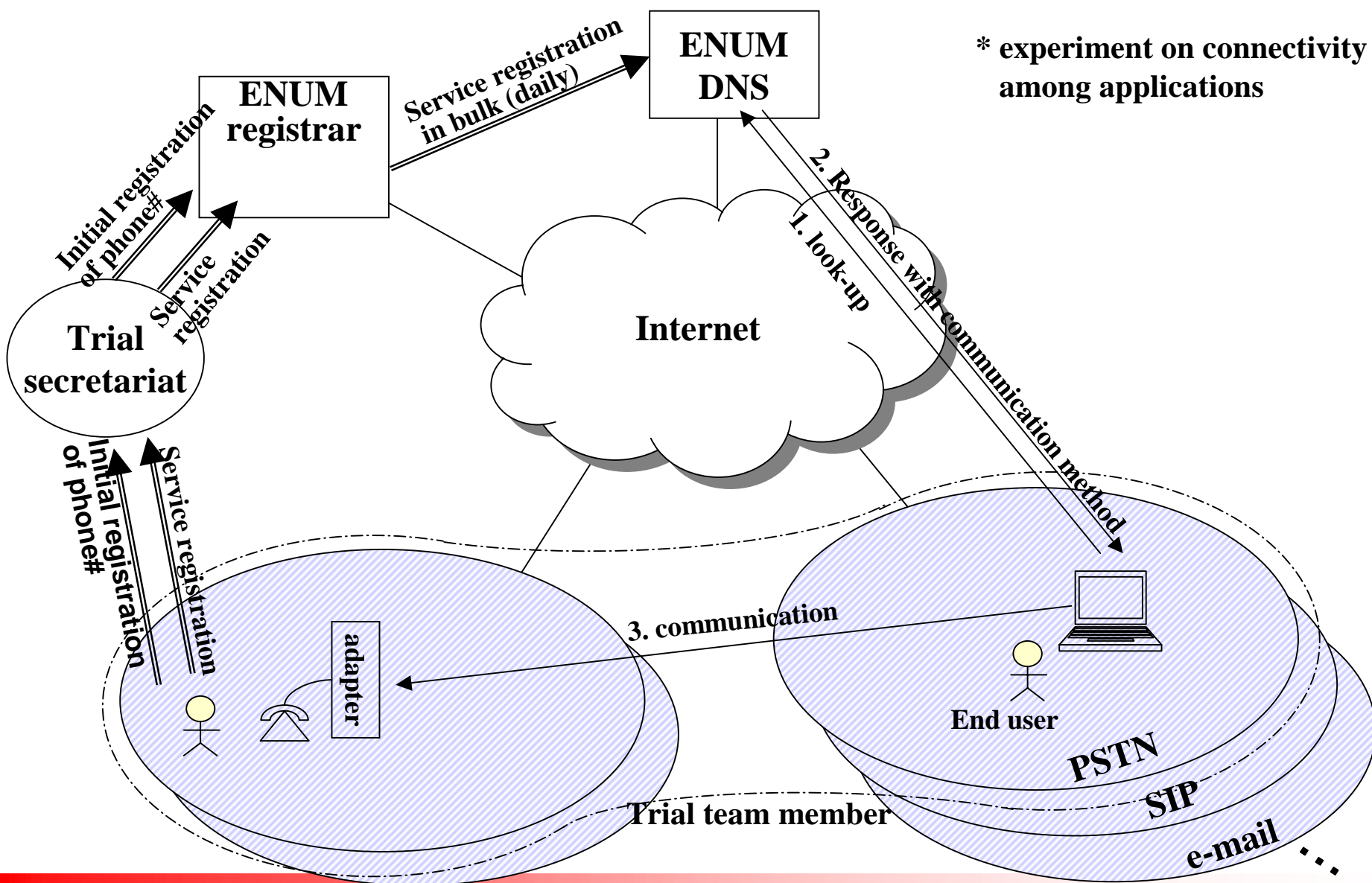
ETJP phases and schedule (Initial Plan)



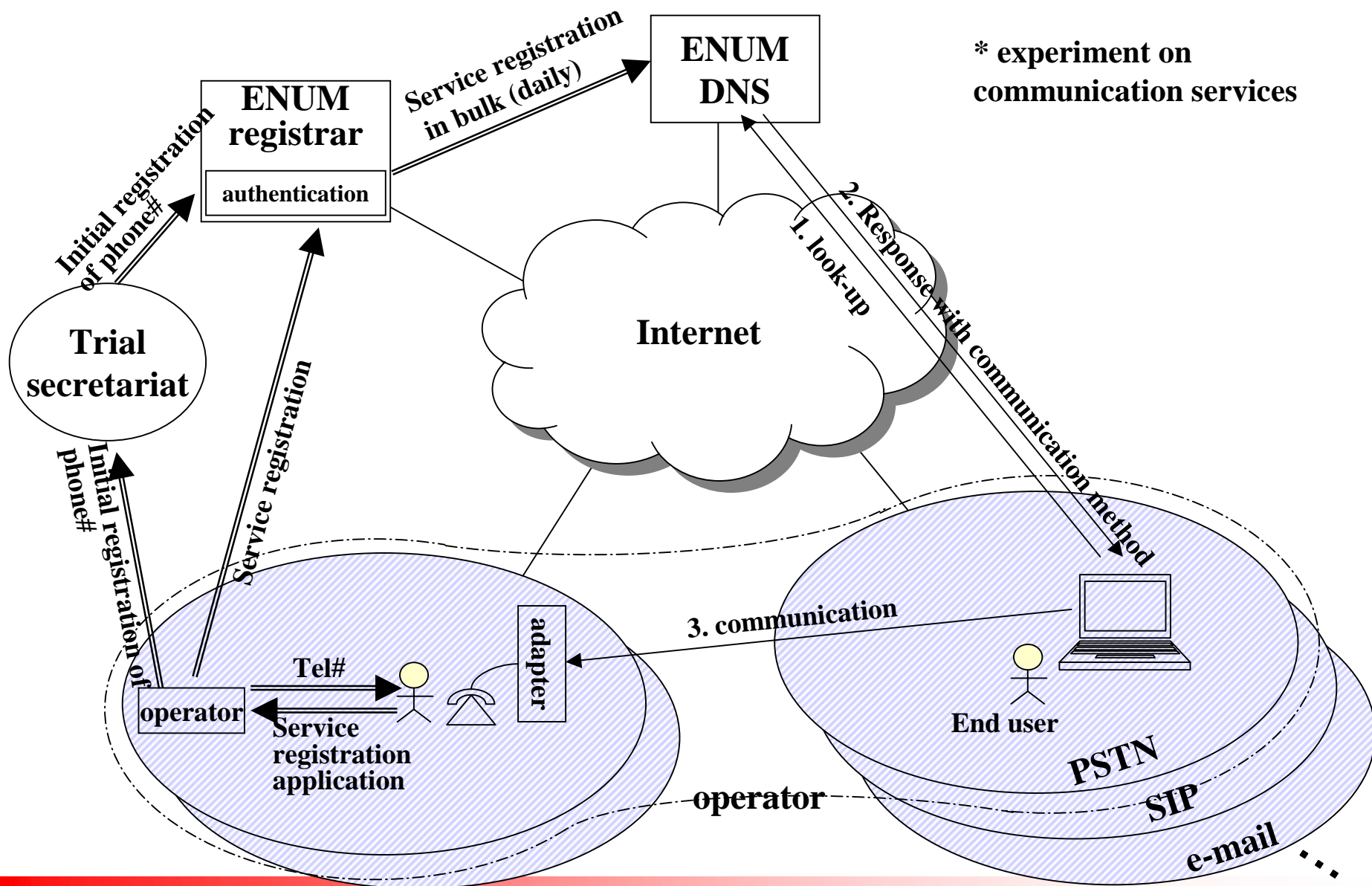
ETJP Working Groups

- **Privacy and Security WG**
 - **Objective**
 - Discuss data treatment policy in each phase of trial and then publish guidelines
 - **Results**
 - Guideline for ETJP system
- **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
 - **Results**
 - Definition of model and requirements
 - ENUM DNS evaluation reports

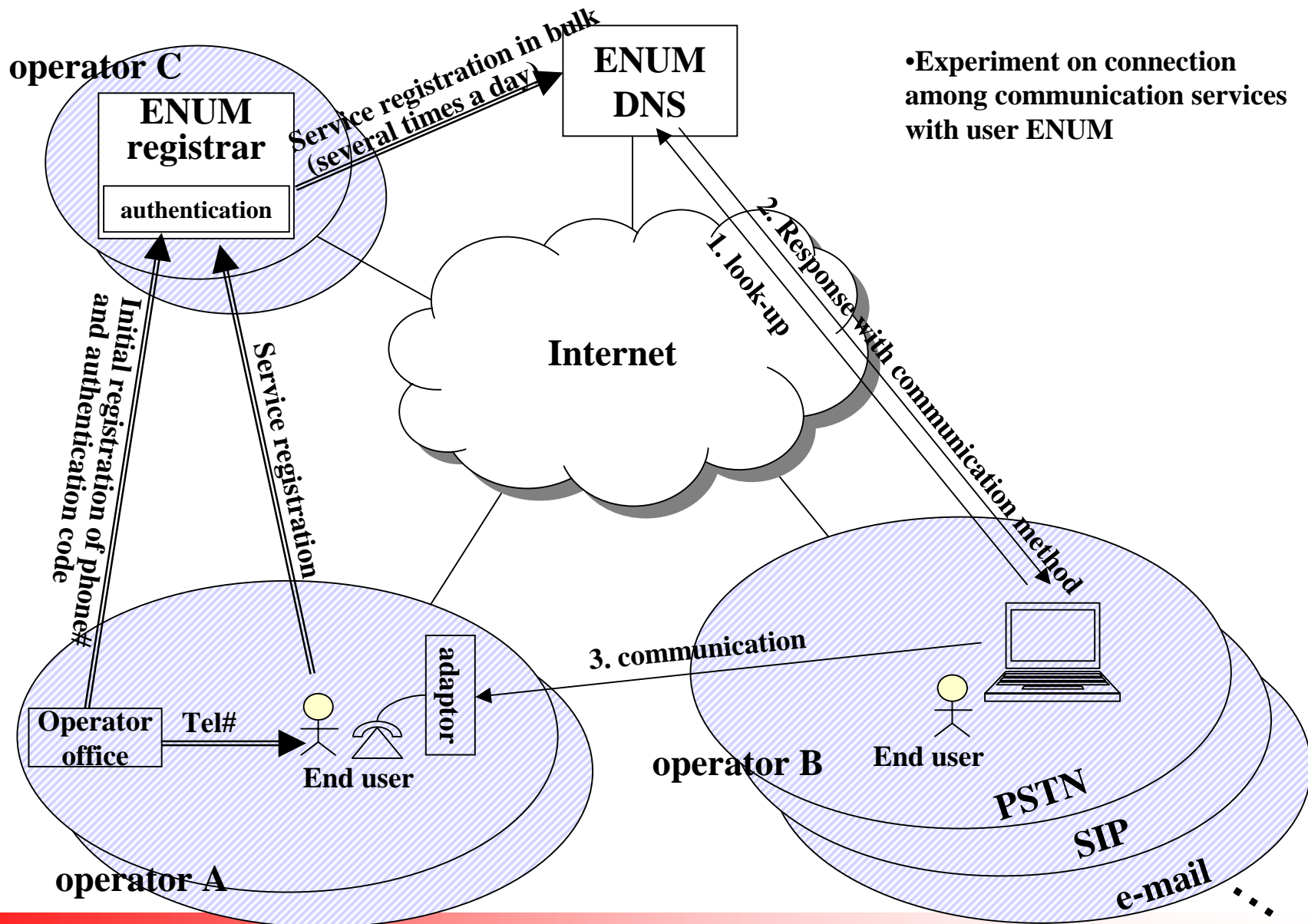
ENUM trial (phase1)



ENUM trial (phase2)



ENUM trial (phase3)



- Experiment on connection among communication services with user ENUM

Layer of ENUM services and standards

phase3

Communication service (multiple carriers)

Authentication, Social Security

phase2

Communication service (single carrier)

Provisioning, Communication Security

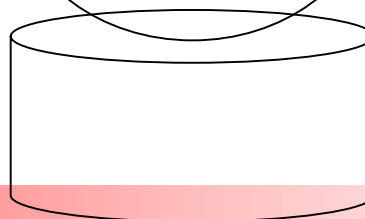
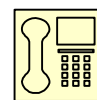
phase1

Applications/Terminals

SIP, Mail, Web, etc.

Infrastructure

ENUM DNS



Sample client

SDK

applications

DNS

w/ help of VoIP System
Interoperability Task Force

References

- **ETJP**
 - <http://etjp.jp/> (in Japanese)
 - <http://etjp.jp/english/>
- **ENUM Study Group**
 - <http://www.nic.ad.jp/en/enum/>
- **VoIP System Interoperability Task Force**
 - <http://www.nic.ad.jp/en/voip-sip-tf/>
- **JPRS**
 - <http://jprs.co.jp/enum/> (in Japanese)