

# **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](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)?**

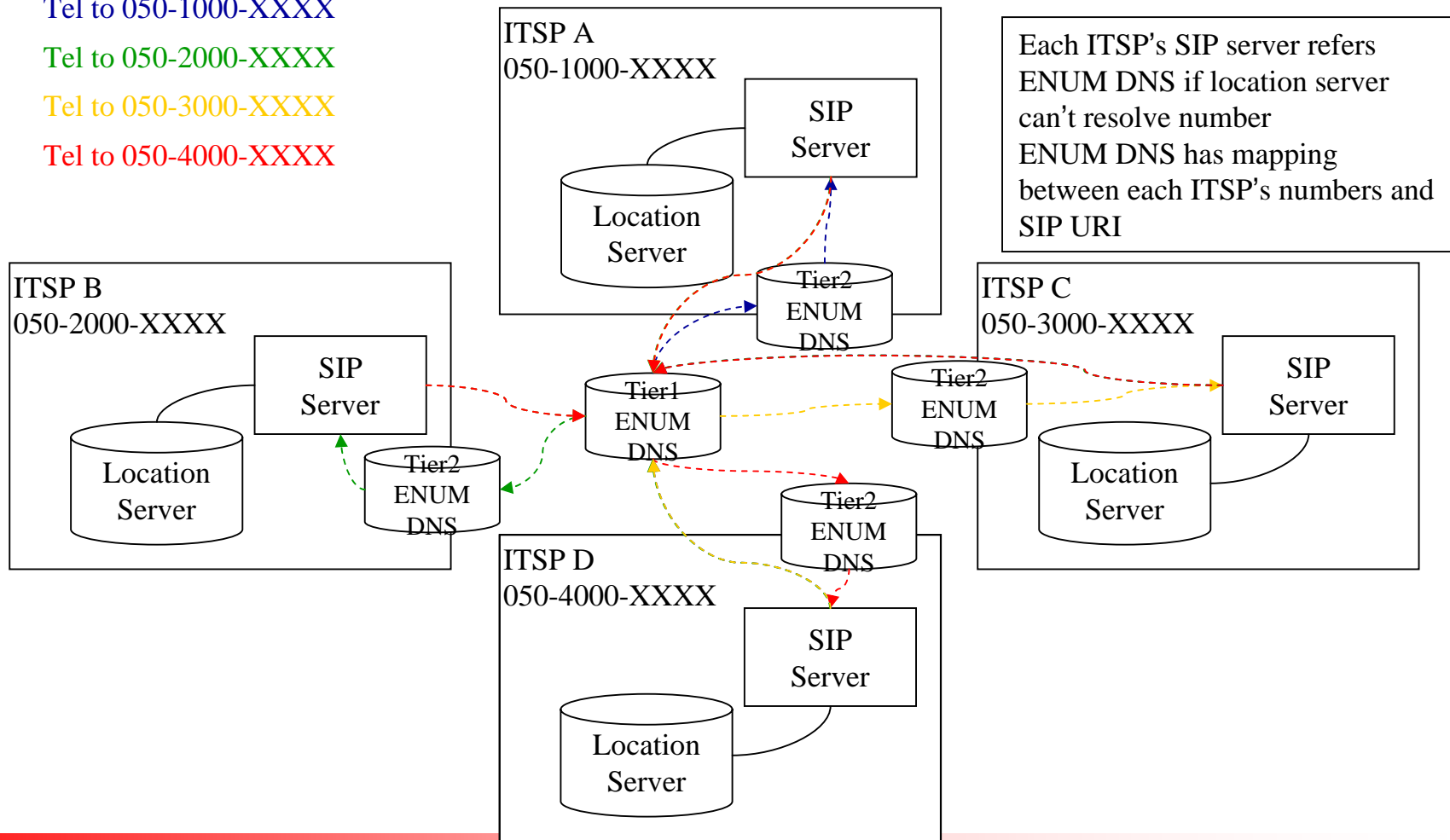
# Resolution with ENUM

Tel to 050-1000-XXXX

Tel to 050-2000-XXXX

Tel to 050-3000-XXXX

Tel to 050-4000-XXXX



# 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**
  - **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**

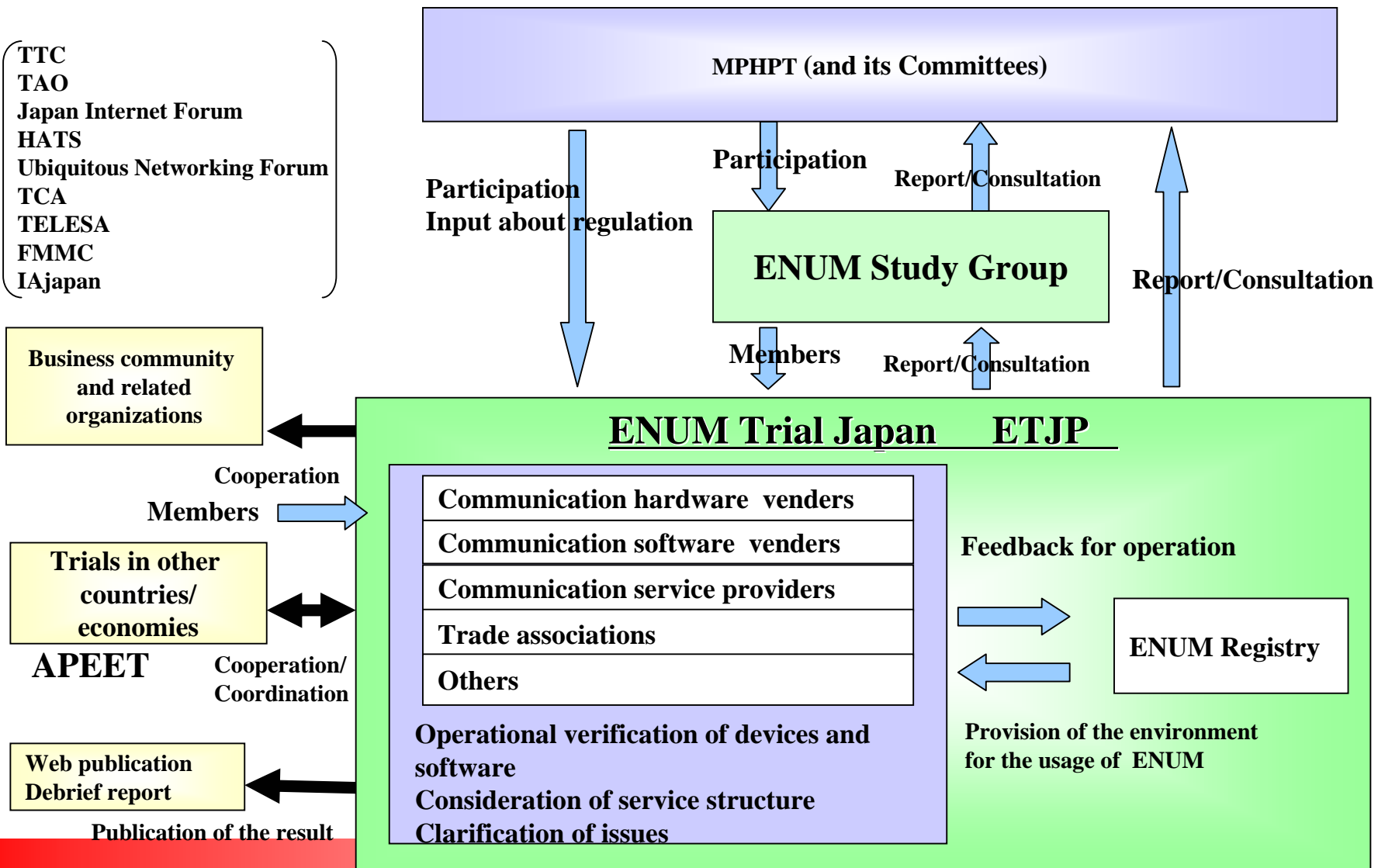
**Japan Registry Service Co., Ltd.  
(JPRS)**

- **Yoshiki Ishida**

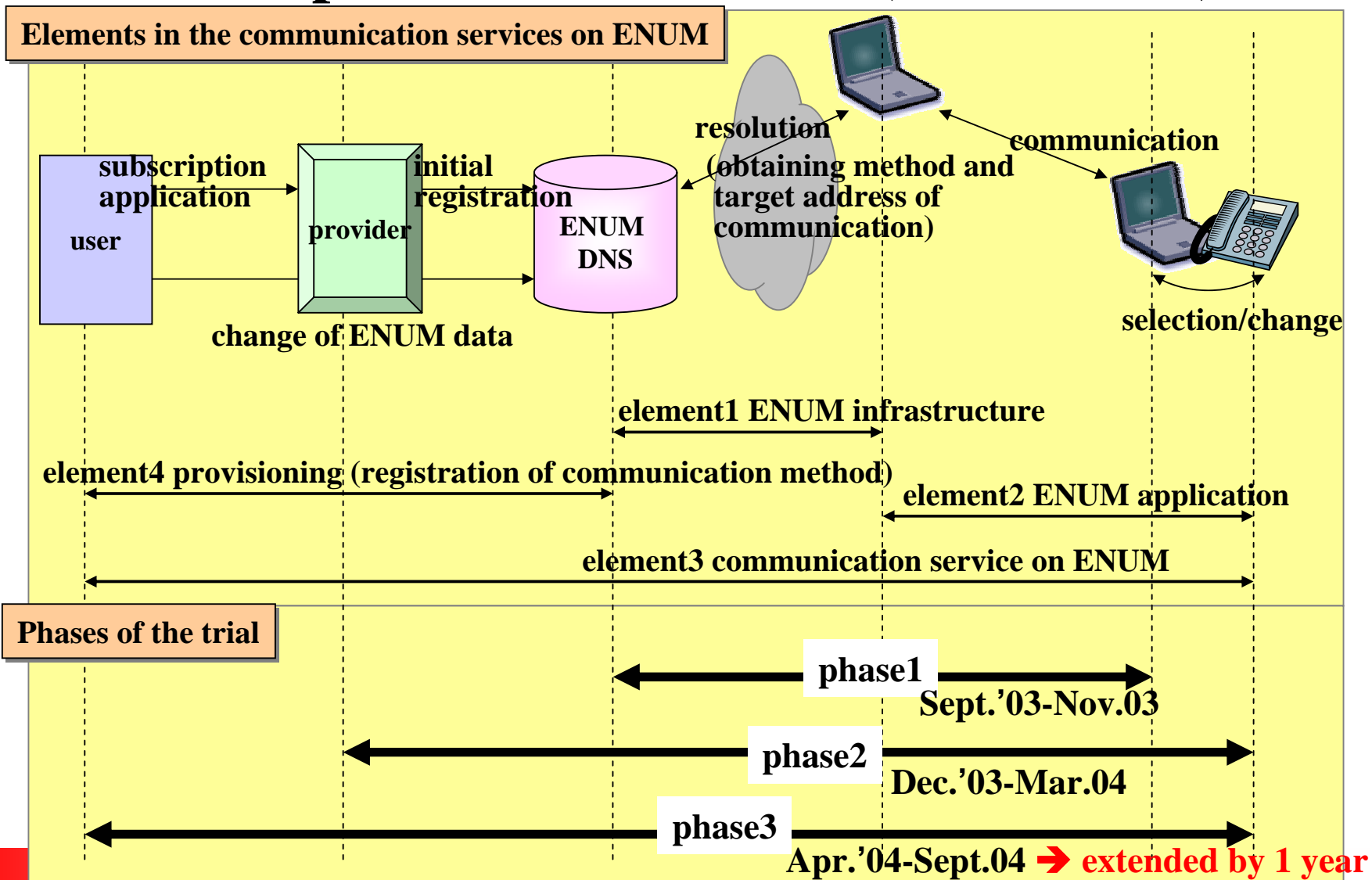
**WIDE Project**



# ETJP and related organizations



# ETJP phases and schedule (Initial Plan)

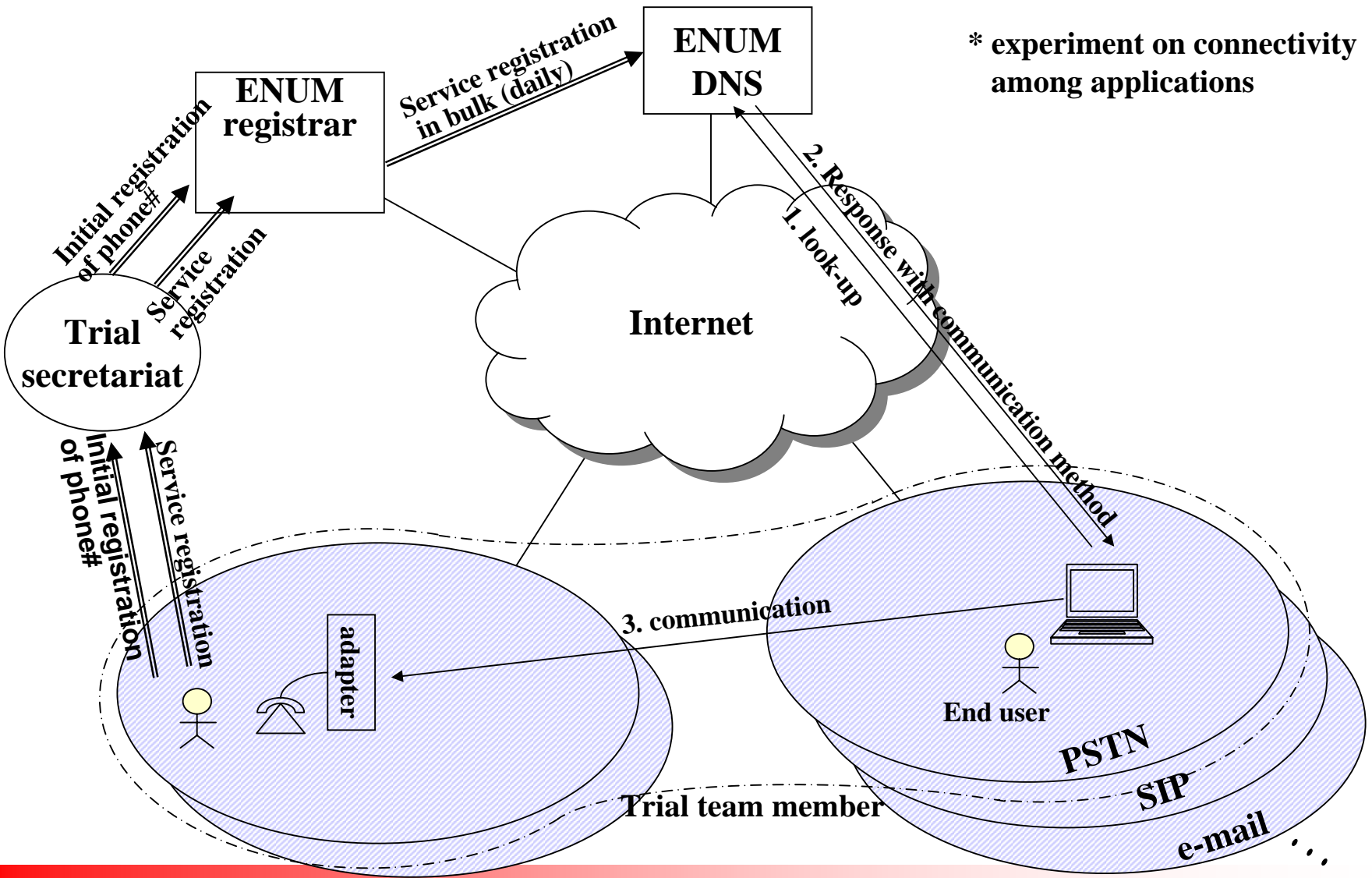


# ETJP Working Groups

- **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**

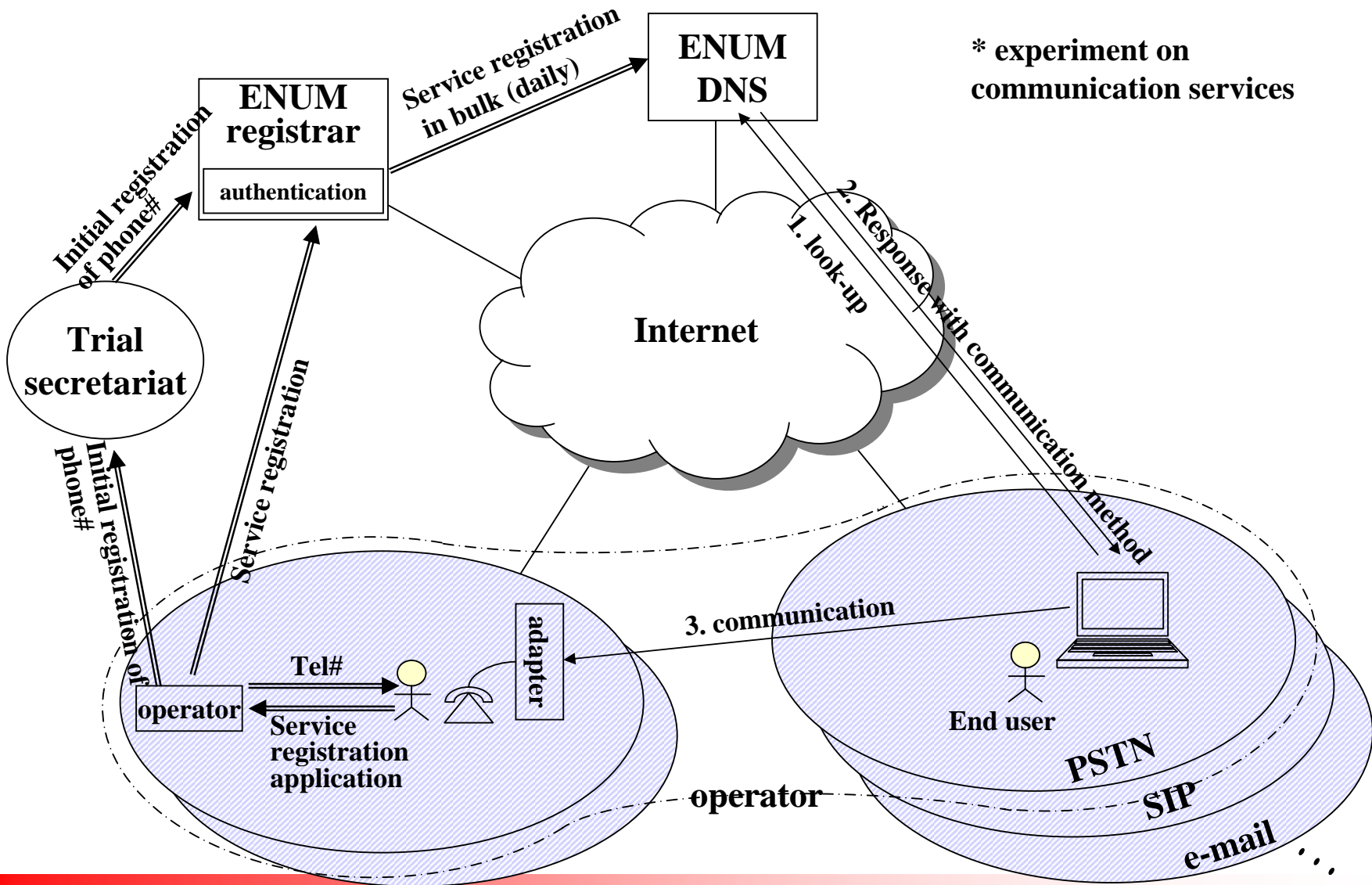
# ENUM trial (phase1)

\* experiment on connectivity among applications

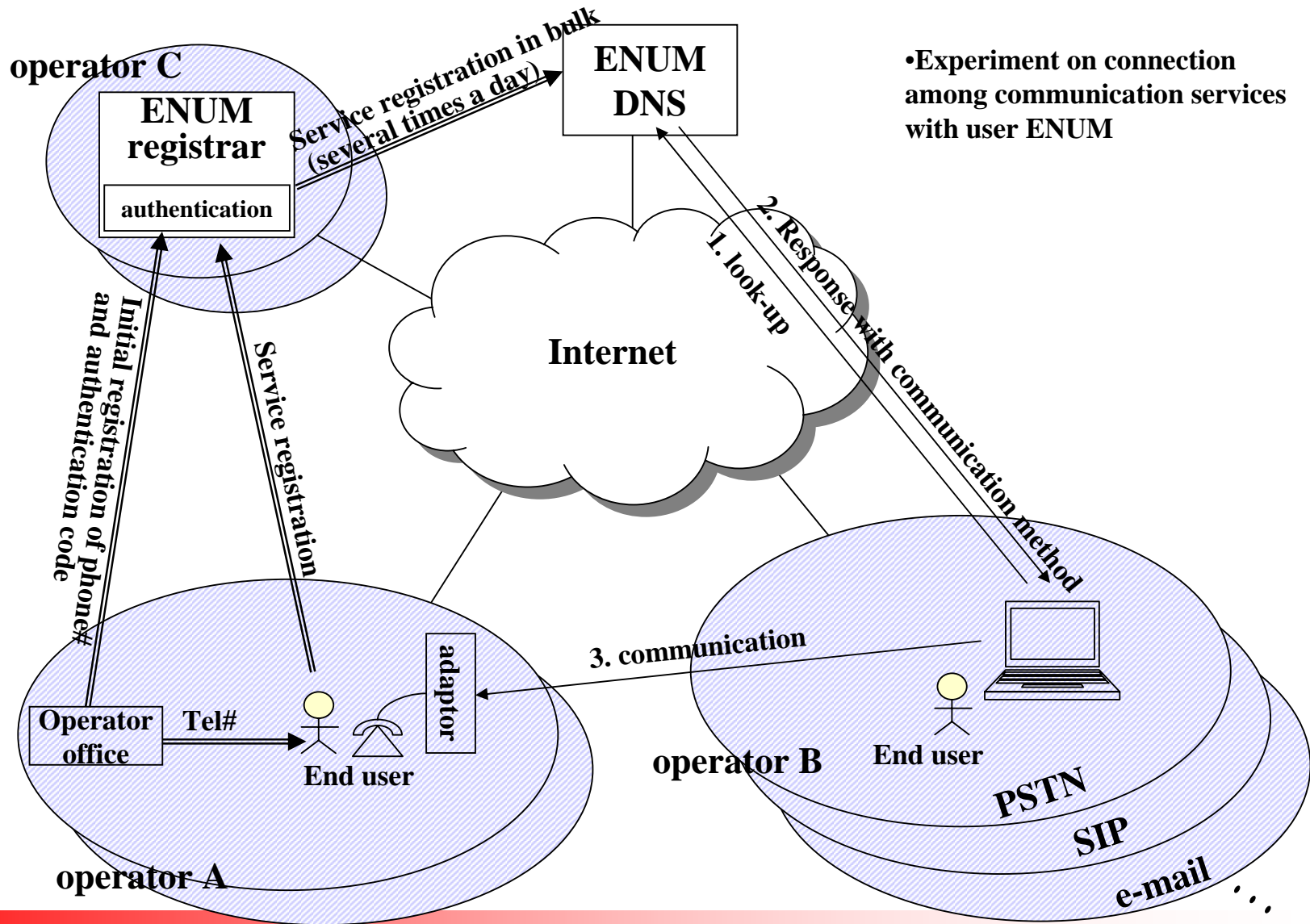


# ENUM trial (phase2)

\* experiment on communication services



# 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

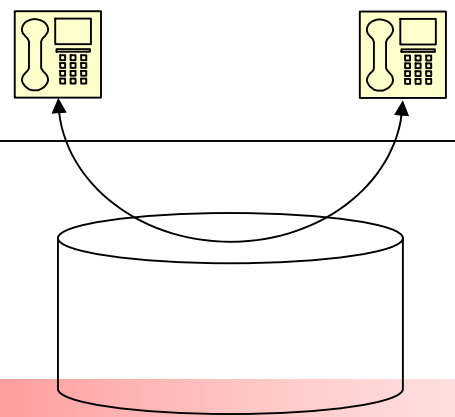
## phase2

Communication service (single carrier)  
Provisioning, Communication Security

## phase1

Applications/Terminals  
SIP, Mail, Web, etc.

Infrastructure  
ENUM DNS



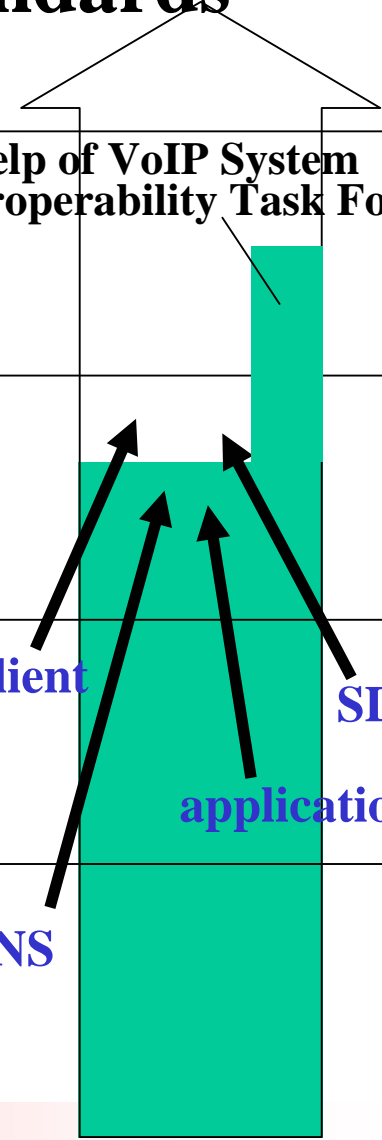
Sample client

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)