

# **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**

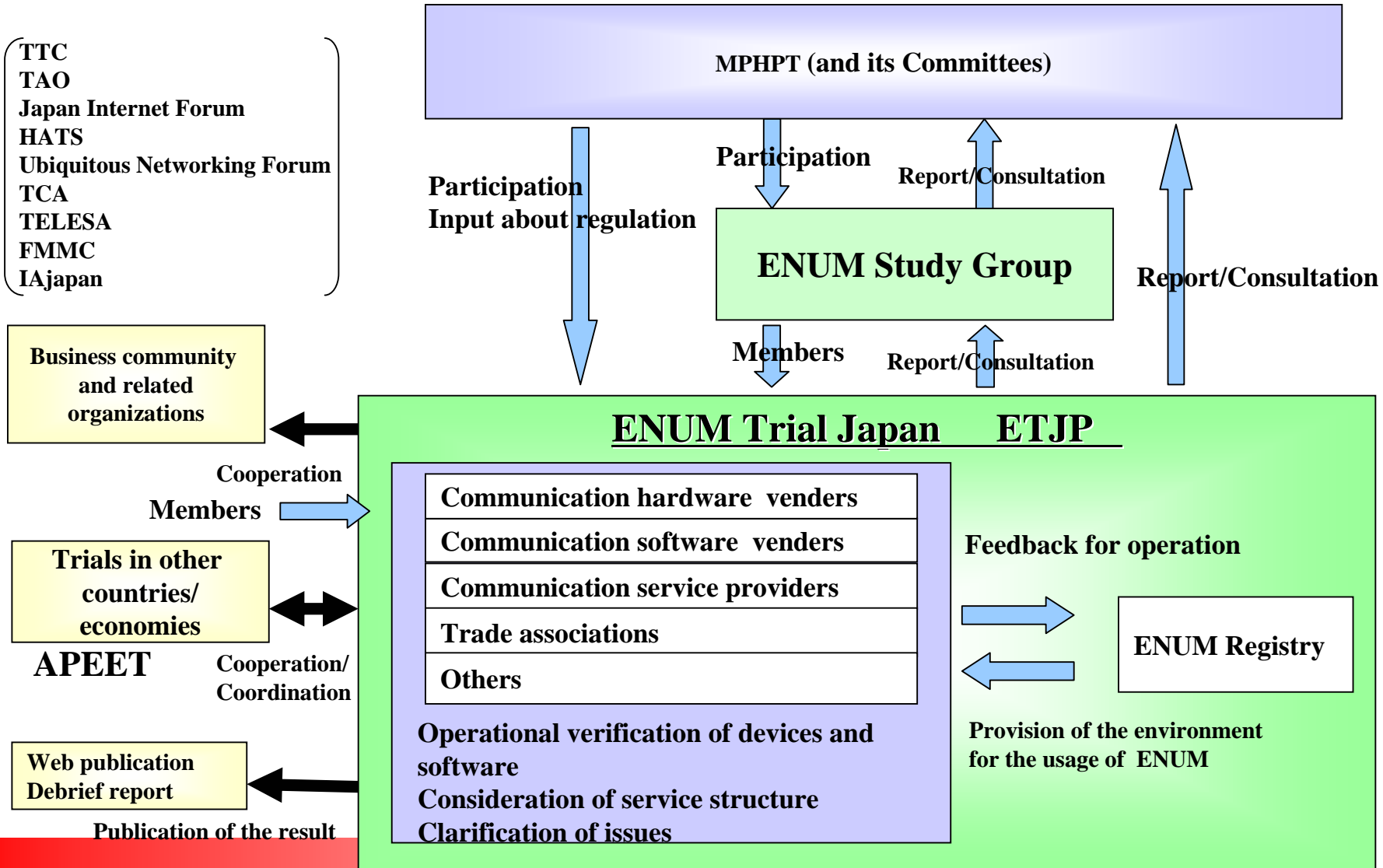
**Japan Registry Service Co., Ltd.  
(JPRS)**

- **Yoshiki Ishida**

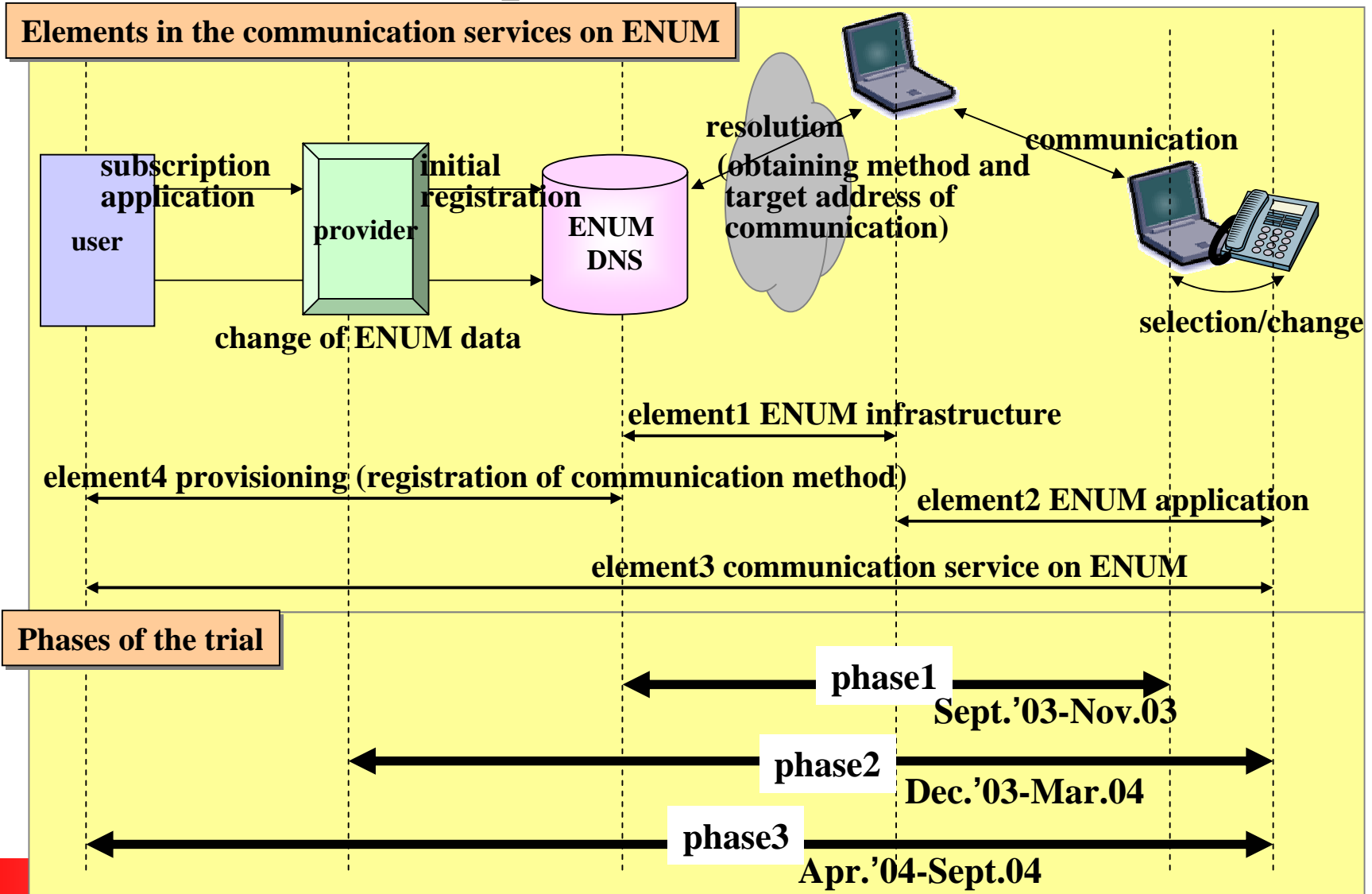
**WIDE Project**



# 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

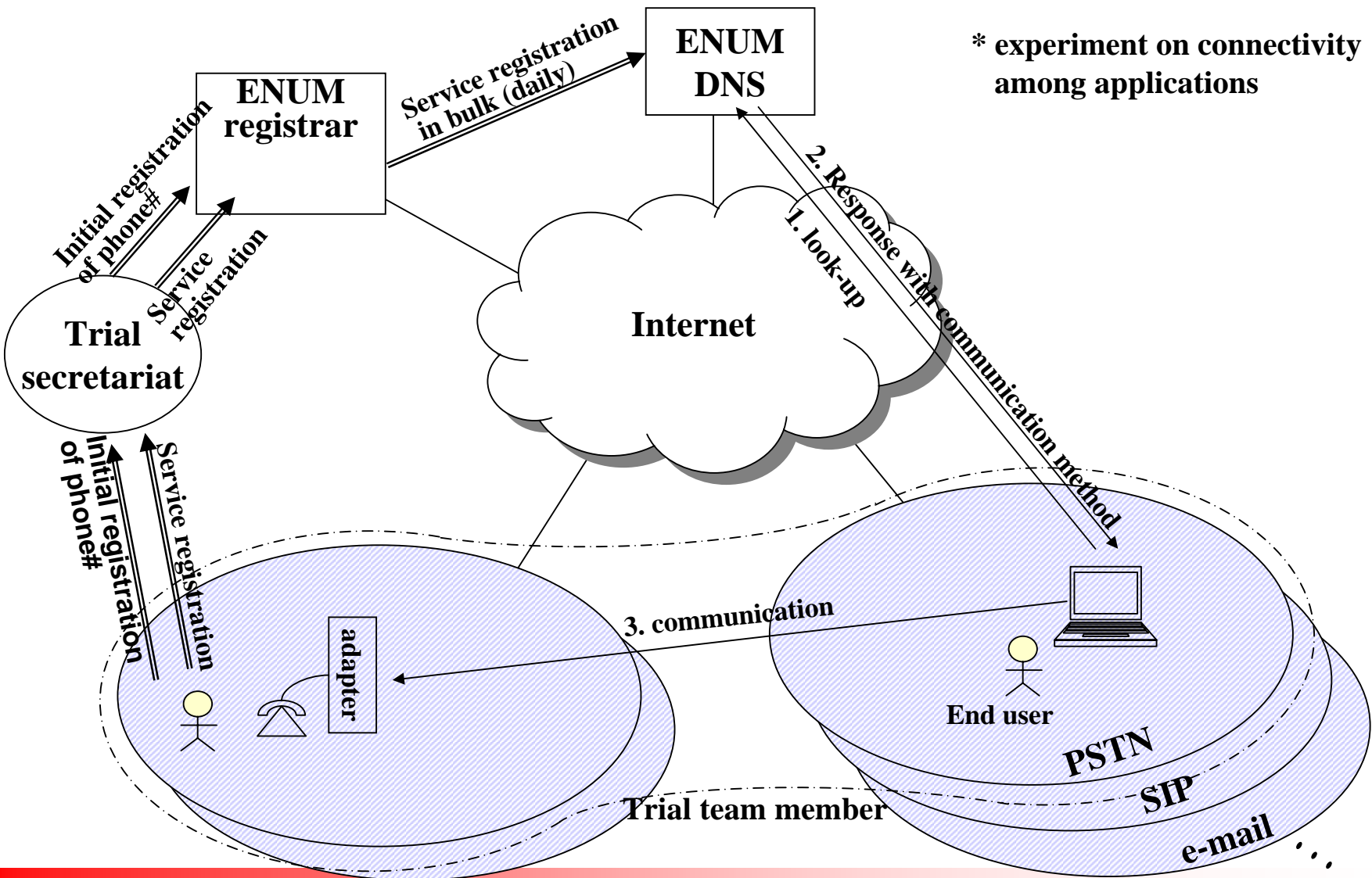


May 2004

# ETJP Working Groups

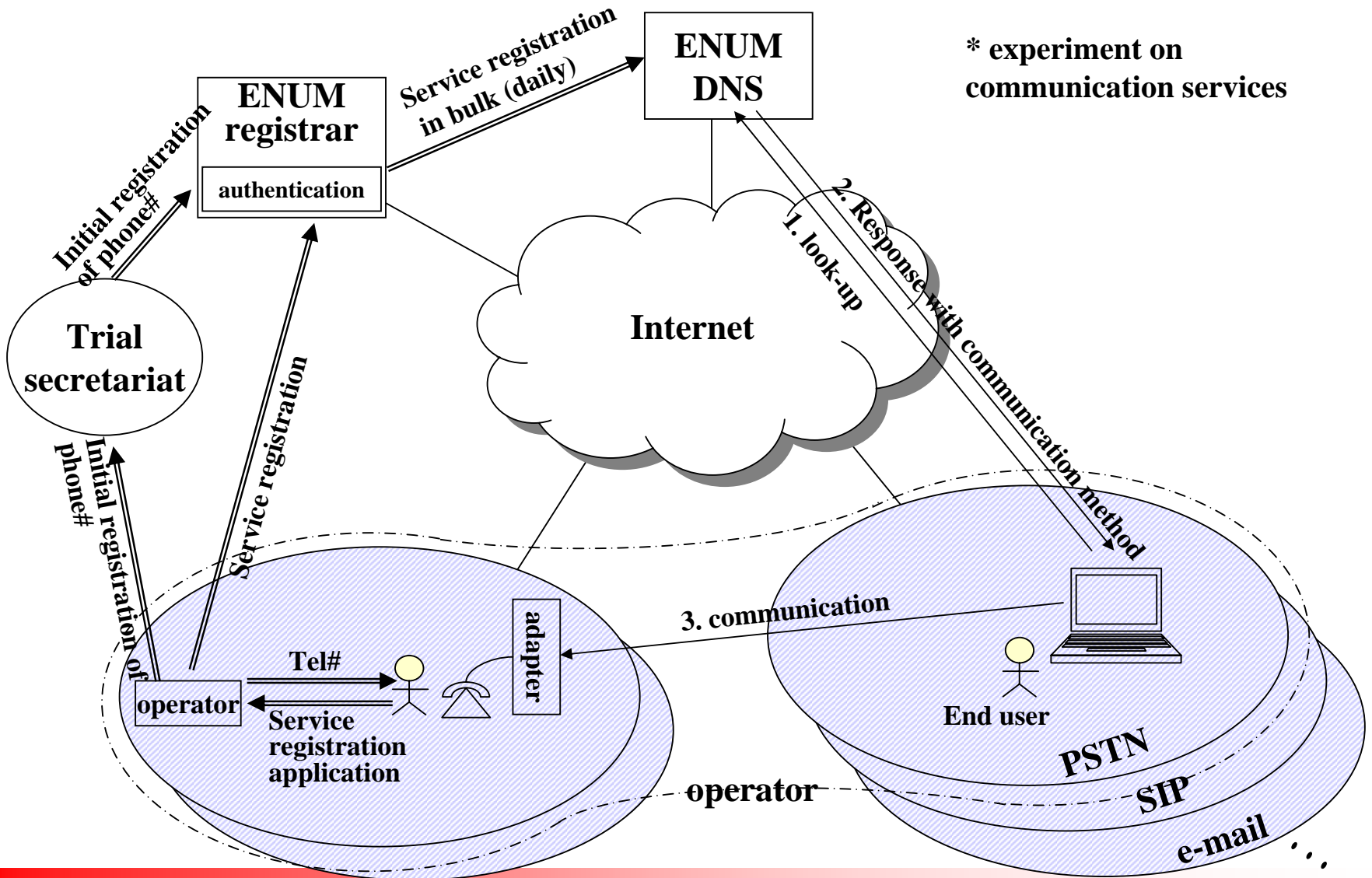
- **Privacy and Security WG**
  - **Objective**
    - **Discuss data treatment policy in each phase of trial and then publish guidelines**
  - **Milestone**
    - **Jan 2004: First draft, request for comments**
    - **June 2004: guideline published**
- **DNS WG**
  - **Objective**
    - **Define possible 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)

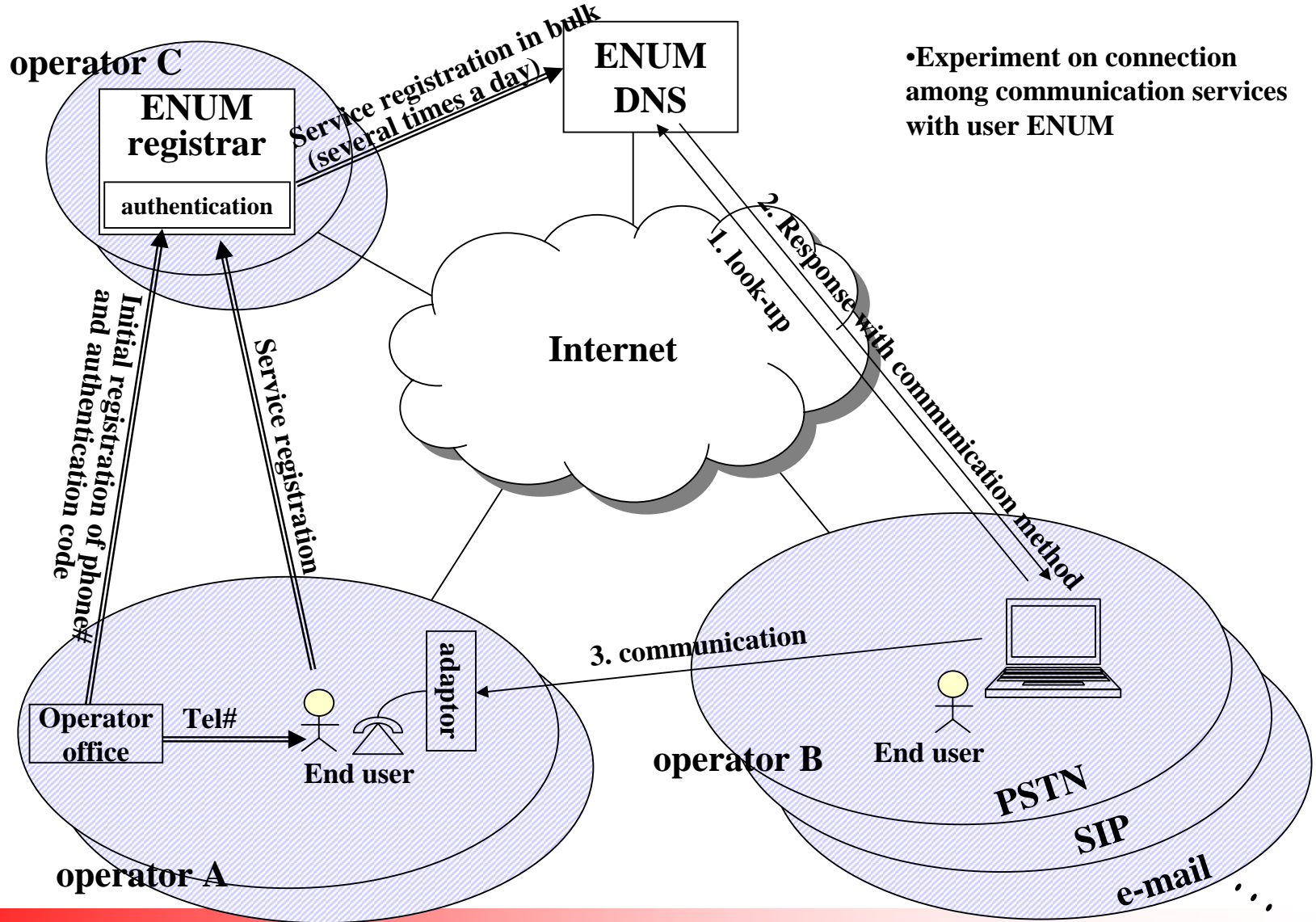


# ENUM trial (phase2)

\* 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

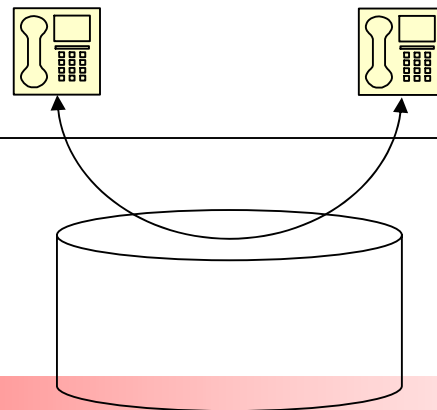
## phase1

Applications/Terminals

SIP, Mail, Web, etc.

Infrastructure

ENUM DNS

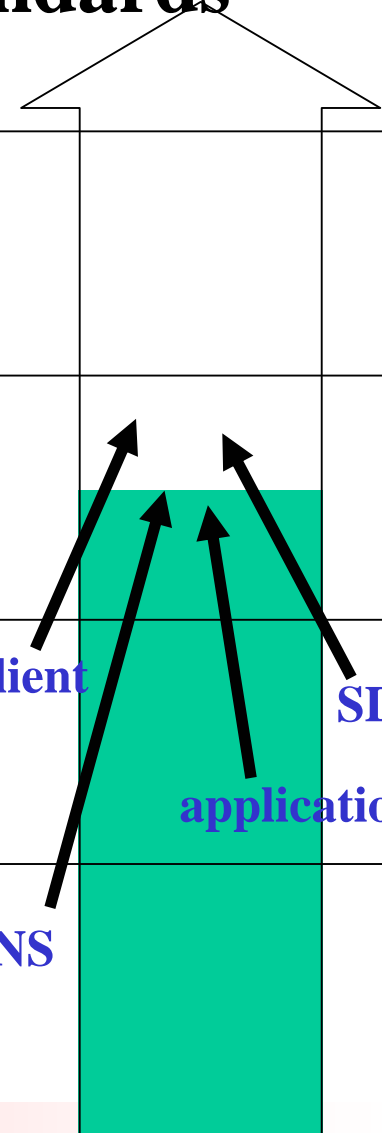


DNS

Sample client

SDK

applications



# 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)