

DSRC in Japan

-Status Report-

December 2002
Miami Beach, FL

DSRC International Task Force
ITS Info-communications Forum
Japan

1. ARIB STD-T75

(1) In Japan -Domestic Standard-

- SEP. 2001: Approved by ARIB

(2) In ITU-R -Spectrum Issue-

- AUG. 2002: Adopted by Radiocommunications Assembly

(3) In ISO/TC204 -Layer 7 (Applications Layer)-

- OCT 2002: <TC204 Resolution >

Approved as a CD

Send it as DIS

2. ARIB TR DSRC/ASL -Objectives

ASL: Application Sub Layer

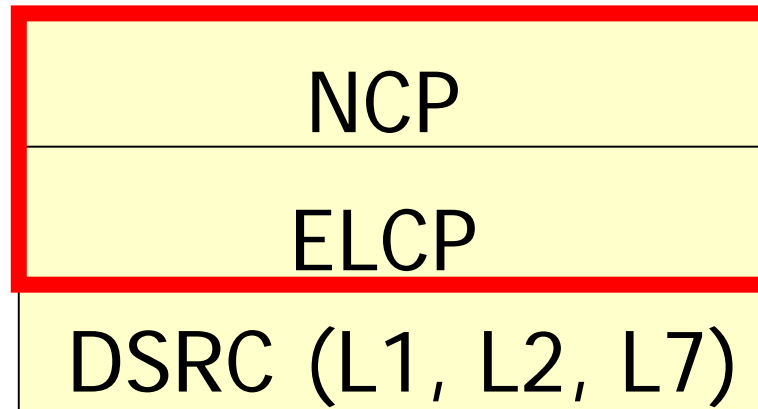
Objectives:

- Easy to realize for **DSRC Multiple Applications**
- Application independent OBU
(**Multiple applications OBU**)
- Easy applications development
- Promote DSRC applications
- Maintain **Interoperability**

2. ARIB TR DSRC/ASL

- ASL Configuration

ASL



- For IP connections, RF Tag services, Non-IP services
- NCP: Network Control Protocol
- ELCP: Extended Link Control Protocol





Provide communications and management services to compensate DSRC communications functions

2. ARIB TR DSRC/ASL - ASL Configuration

Major functions: Provide control functions and interfaces depends on applications

PPP Control:	For serial connections
LAN Control:	For ether net connections
Local port control:	For non-IP connections

DSRC Parameters:

ASL		AID=18
ETC		AID=14
AHS		AID=17
Others		AID=1 (Recommended)

2. ARIB TR DSRC/ASL

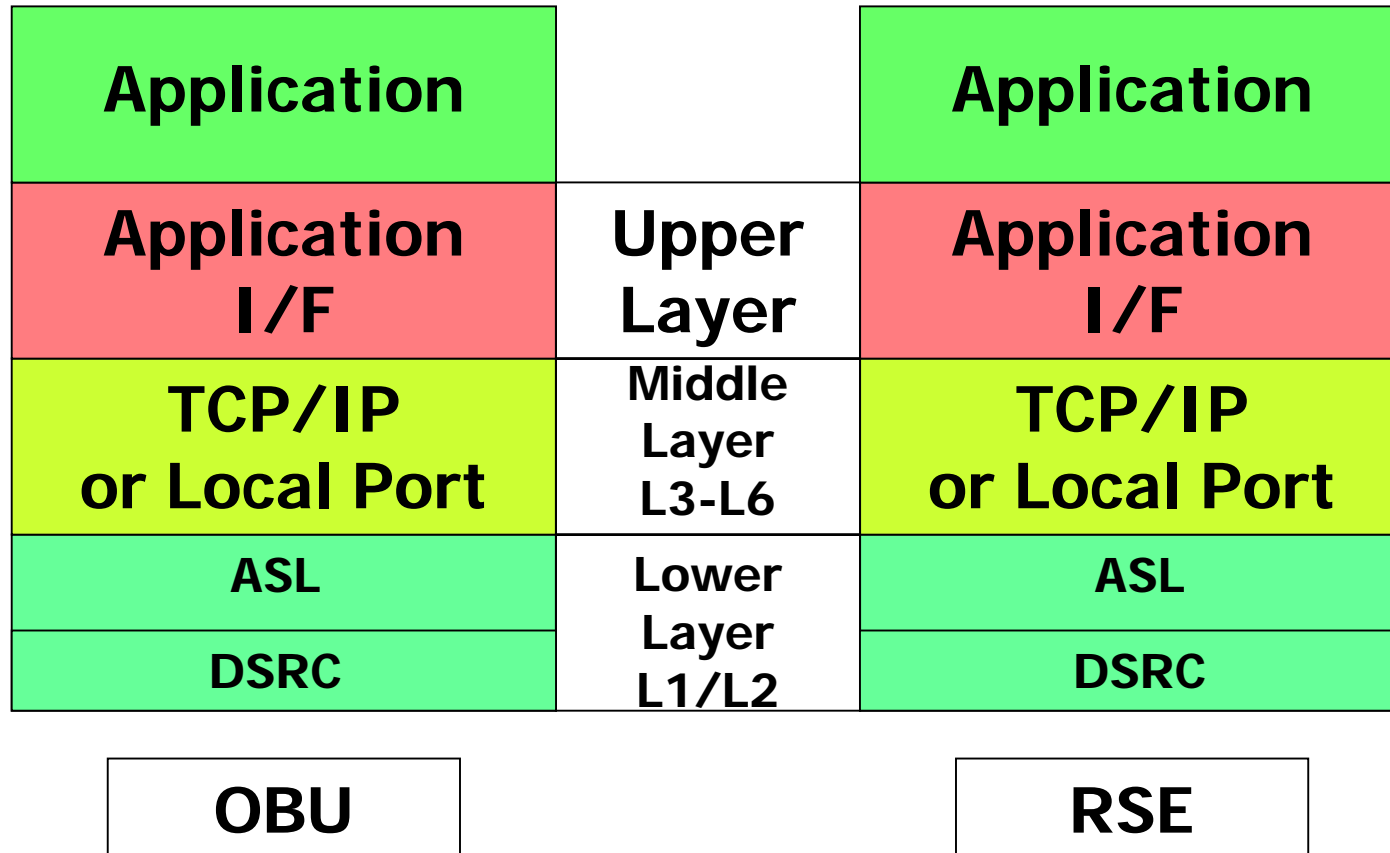
- Development Schedule

Oct. 2002: Tentative ASL technical reference (v. 0.05)
- Japanese version only -

Oct. 2002 – Feb. 2003:
Field tests based on ASL standards
by HIDO, ARIB and Regional ITS Projects

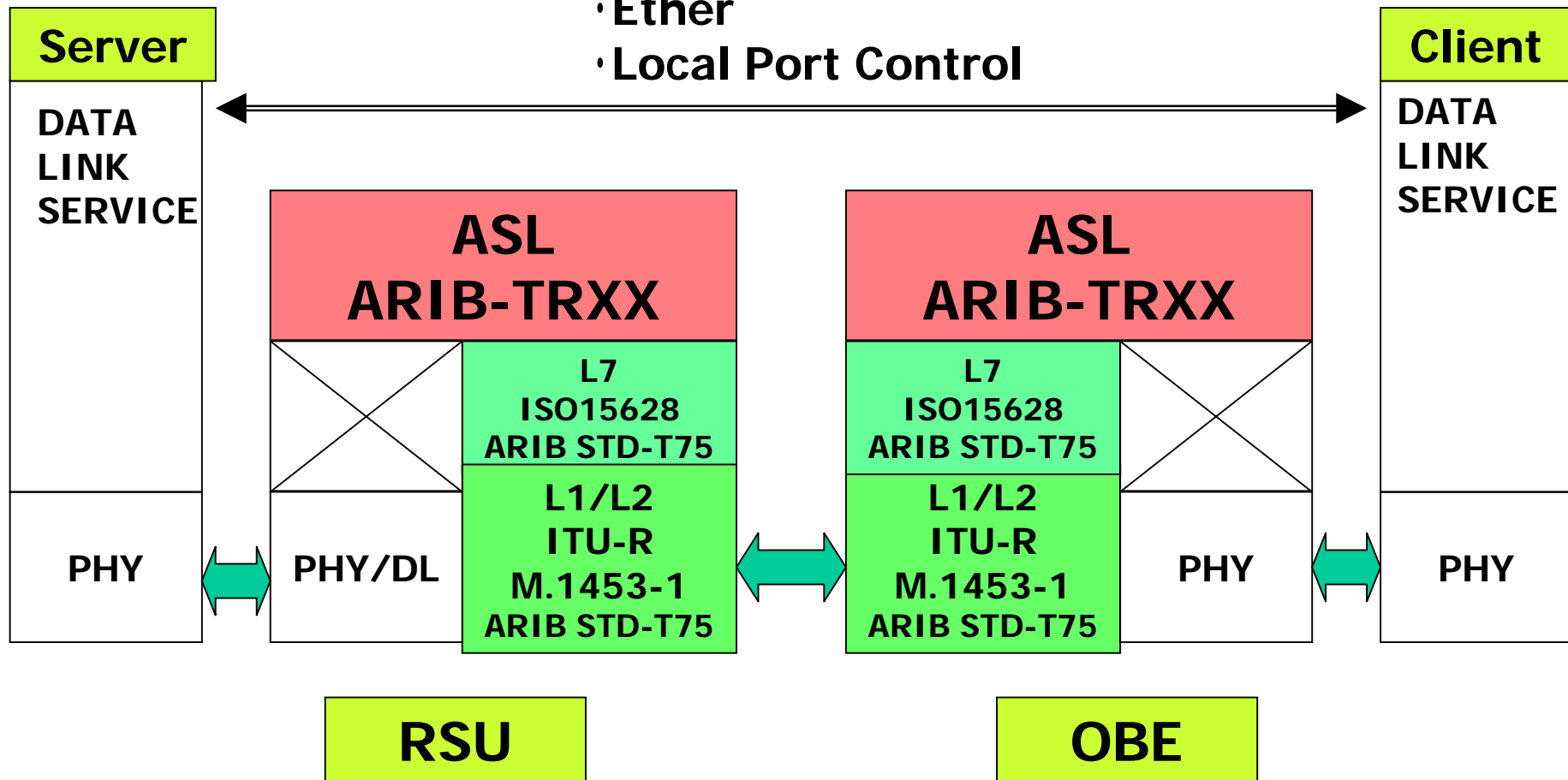
Spring 2003: Official ASL technical reference to be published

Examples of ASL Applications



ASL: DSRC detail

- PPP
- Ether
- Local Port Control



2. ARIB TR DSRC/ASL

- Field tests projects

1. Simplified Model:

Trucks operation management System ...Fukuoka City (Regional ITS Project)

2. Non-IP Model:

Credit settlement system...JSK

3. IP Model:

3-1. PPP

(1)Credit settlement system...JSK

(2)Information shower field test...HIDO

(3)Technical study for efficient use of 5.8GHz band radio spectrum...ARIB

(4)Parking area management system...Toyota City (Regional ITS Project)

(5)Information contents service Project...ITS Research Institute

(6)Simplified settlement system... ITS Research Institute

3-2. Ethernet

(1) Technical study for efficient use of 5.8GHz band radio spectrum...ARIB

(2)On demand bus service system...Niigata Pref. (Regional ITS Project)

(3)ITS for pedestrians...Kochi Pref. (Regional ITS Project)

3. ETC

Japan Highways, Metropolitan Express Ways, Hanshin Express Ways, Honshu-Shikoku Bridges

- Toll Plaza: 733 (Goal: 1,200)
- Toll Lanes: 1,300
- OBU: Nov. 30, 2002; 560,000
Jun. 30, 2002; 360,000
 - Target: 10 million (by 2007)
 - 50% of total transactions
- Prepaid discount service: 14% for JPY50,000

As of November 30, 2002

- Organization of Road Services and Enhancements ;

4. DSRC related events in Asia-Pacific

7th ASTAP (Asia-Pacific Telecommunity Standardization Program) Forum

-JUN, 2003 in South Korea

6th Asia-Pacific ITS Forum

- JUL. 1-4, 2003, Taipei

4th ITST 2003

- OCT., 2003, Singapore