

# DSL

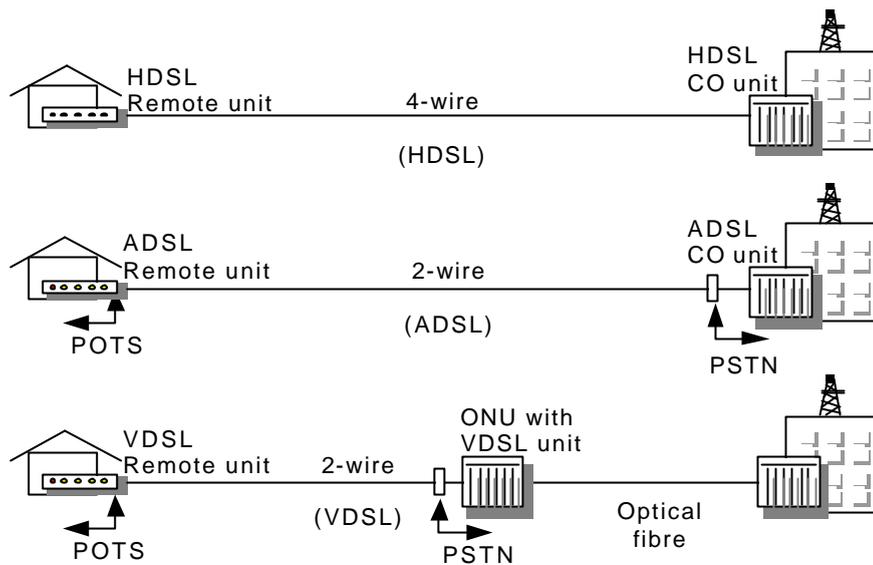
## Workflow Management System for DSL Service Provisioning

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DSL 가 ADSL DSL 가 , DSL 가 가 DSL (Workflow)

### 1.

xDSL PSTN , DSL 가 IP IP VPN end-to-end 가 VoD(Video on Demand) 가 [1]. 1999 가 2001 가 ADSL [2][3] provisioning) 가 (SO: Service Order) ADSL (Service Provisioning)



( 1 ) xDSL 가

(Service Management Layer)

## 2. DSL

### 2.1 가

DSL

가

가

xDSL

가

DSL

( 1 ) DSL

가

HDSL(High bit rate DSL) T1/E1

ADSL(Asymmetric DSL)

8Mbps

VDSL(Very high bit rate DSL)

51Mbps

( 2 )

### 2.2 end-to-end

(ADSL)

ADSL end-to-end

CO(Central Office)

SDH

ATM

(Network Access Server)

NAS

가

### 2.3 Business

DSL 가

, 가

end-to-end

가

(Business Model)

가

가

가

DSL

가

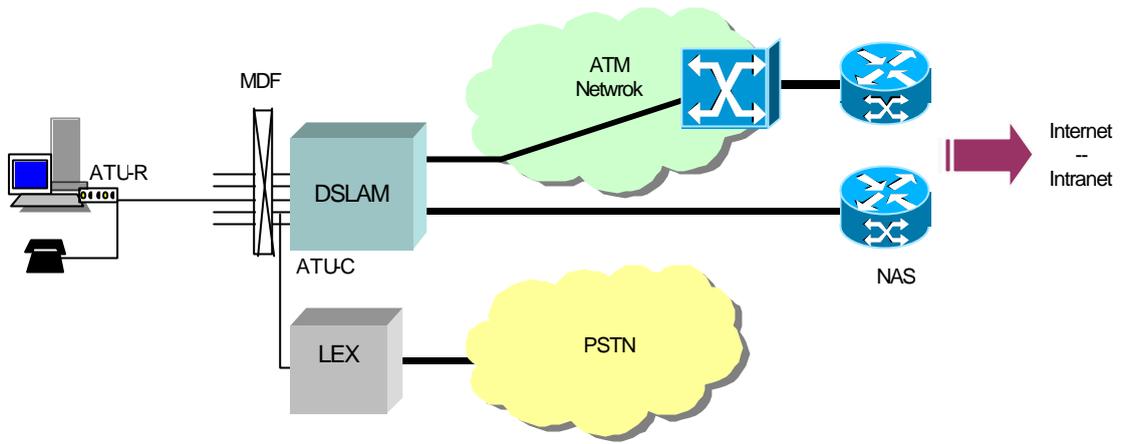
ISP

( )

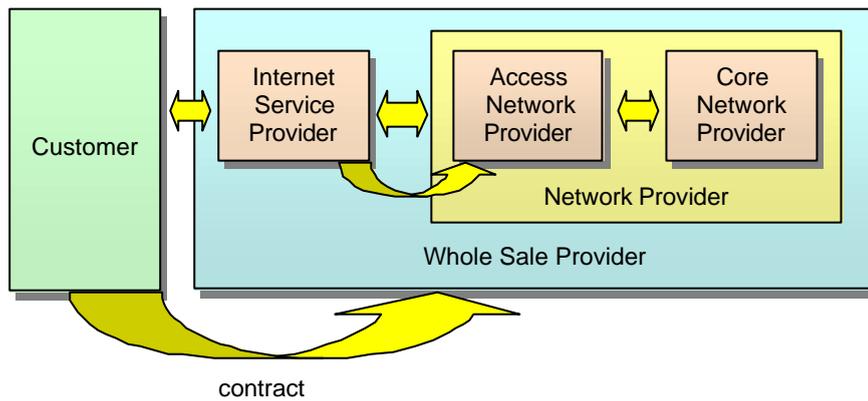
DSL

가

[4]. ( 3 )



( 2) ADSL end-to-end



( 3) DSL

### 3. ADSL

ADSL 가 , 가  
 가 , ATM  
 ,  
 DSL 가 ADSL 가  
 (CPE:Customer Premise Equipment) 가  
 , (MDF) 가

#### 3.1 가

ADSL

가  
 가 ADSL  
 가 ,  
 가 ADSL

( IP, IP, ) NAS

가

#### 4.

### 3.2

ADSL

DSL ,

ADSL

가 가

ADSL

### 3.3 ATM

ADSL

~~PeInfo~~

ATM

. ADSL가

~~PeInfo~~

DSLAM(Digital Subscriber Line

~~PeInfo~~

Access Multiplexer) 가

FLC

~~PeInfo~~

(Fiber Loop Carrier) ATM

~~PeInfo~~

ATM

NAS

ATM

DSLAM

FLC 가

#### 4.1

ADSL

ATM

(ATM/

( PE :

ADSL NMS)

(identifier)

Process Engine)

behavior

/

PS

~~PeInfo~~

(Provisioning Server)

PE ADSL

ATM/ADSL

NMS

가

가

n

DSLAM/FLC

가

PE

, PVC

가

( , )

가

ATM

### 3.4

ADSL

NAS

가

( / )

Pe\_number

PE

. NAS

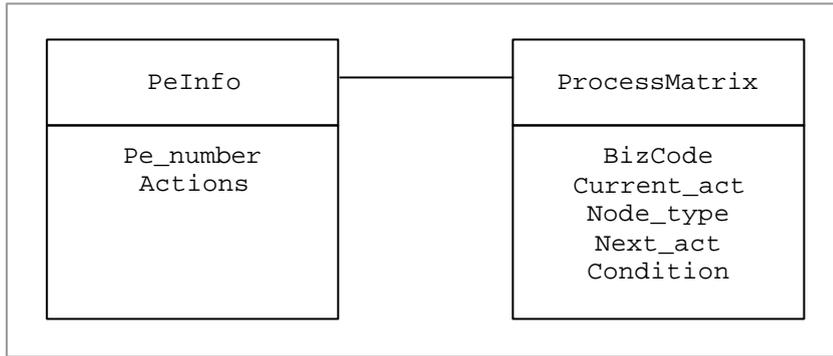
Actions

PE

NAS EMS

. Actions

PE



( 4 ) (I)

ADSL process\_mon  
process\_start Pe\_number Group  
. Process\_pause

ADSL , Process\_resume

가 , Process\_stop

~~ProcessMatrix~~

ProcessMatrix Biz\_code  
PE가

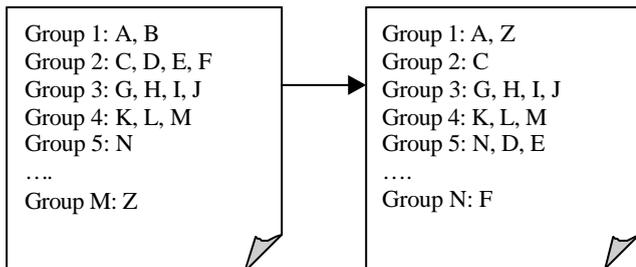
Biz\_code ADSL

가 , Biz\_

Group 2 code , , , ,  
Group2 D, E Group  
5 , N F  
PE

DSLAM/FLC 가

Current\_act 가



actions actions

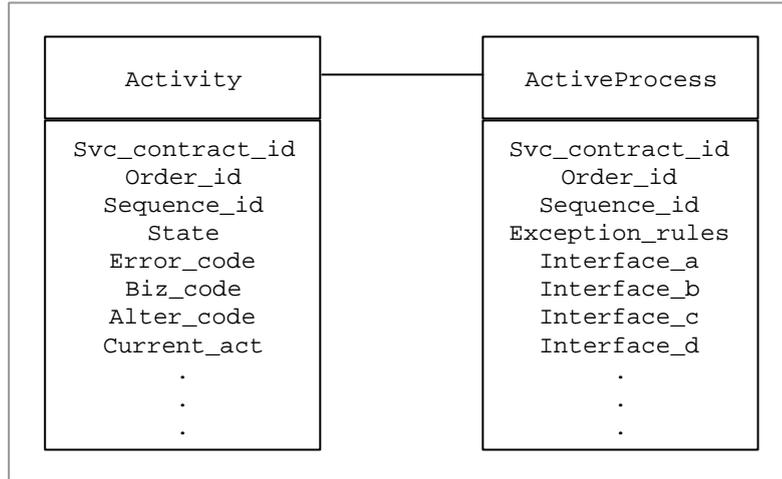
actions 'START'

(가 /

PeInfo behavior process\_start,  
process\_pause, process\_resume, process\_stop,

actions , ATM , NAS





( 6) (II)

~~ActiveProcess~~

ActiveProcess activity , PE procedure

, activity가 (Description Language)

Process active Biz\_code CORBA(Common Object Request Broker Architecture) IDL(Interface Definition Language)가

ADSL

ADSL

, ADSL

, 가 , PS, ATM/ADSL NMS , IP EMS ,

IP

가

(interaction behavior)가

PE 가 Process Matrix , Activity

ActiveProcess

Exception\_rules , PE

Exception\_rules /

Biz\_code  
Current\_act

~~PE~~  
PE

ADSL

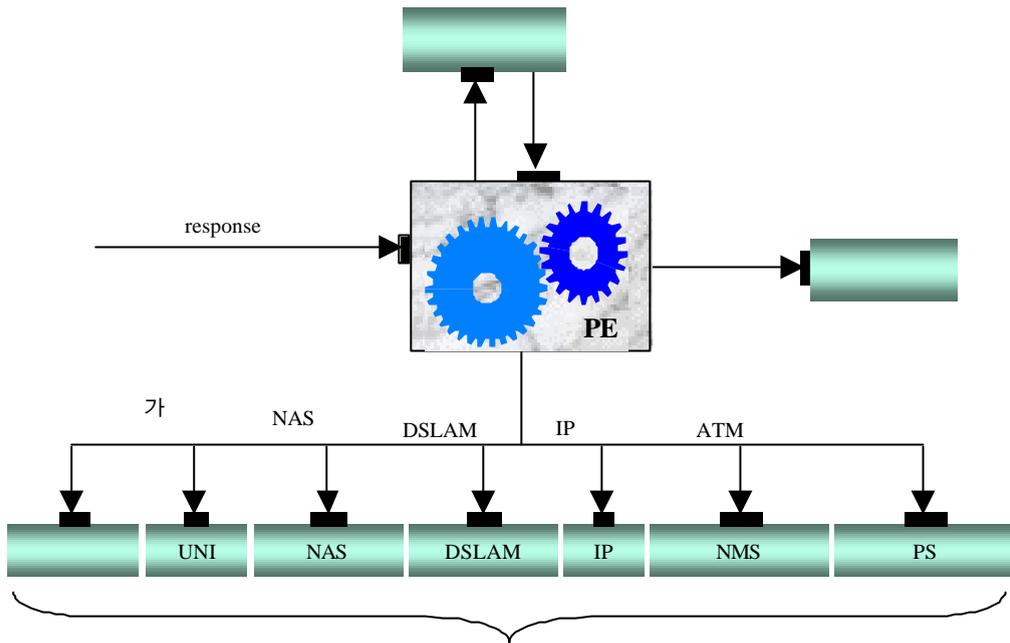
4.2

DSL

PE (Computational model) 4.1

(state=START) ActiveProcess 가

Activity



( 7) ADSL

response  
ADSL  
가

CORBA

IONA Orbix 2.3c

PE가

가

Oracle

R-

C++

DB

PE

DB

가

4.3

가

4.4

PE ADSL  
CORBA

ADSL

가

ORACLE

DB

PE

1.

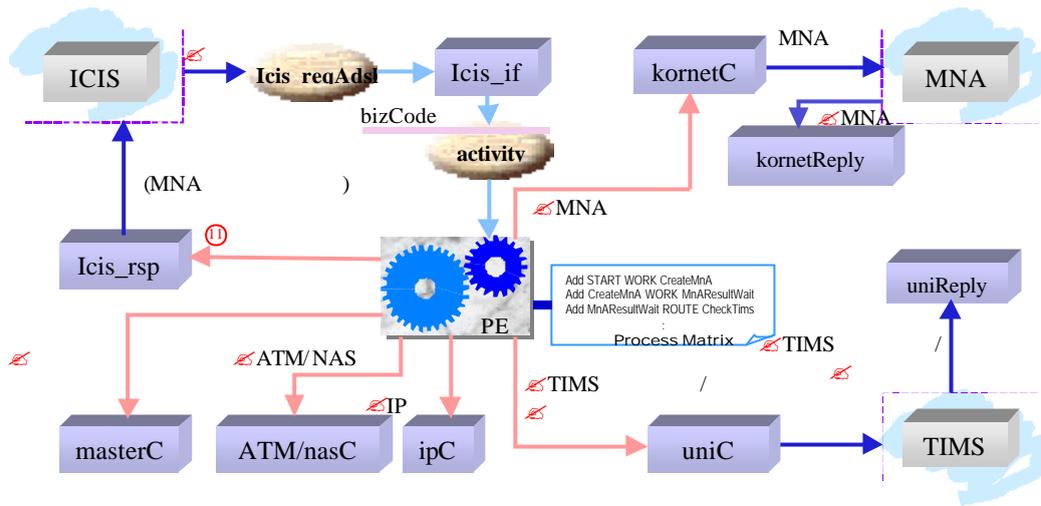
C++

CORBA

ActiveProcess

Activity,

/



( 8 )

ID

2. ID
3. 가 :DSLAM/FLC Engine) , PE(Process
- 가 ,
4. 가 , PS 가 DSL
5. IP ( IP ADSL
- )
6. ATM/ADSL NMS ATM DSL
- PVC
7. NAS EMS ATM PVC
- IP ,
8. 가
9. ( )
10. ,
11. ,

5.

DSL

DSL

Workflow

. ADSL

가 , ATM

ADSL

[            ]

- [1] ITU-T Draft New Recommendation G992.1, Asymmetric Digital Subscriber Line (ADSL) Transceivers, Mar., 1999.
- [2] Workflow Management Facility, Revised Submission of OMG Document, 1998
- [3] Dongsoo Han, Jaeyong Shim, Chansu Yu, ICU/COWS: A Distributed Transactional Workflow System Supporting Multiple Workflow Types, IEICE tr. On Information and Systems, Vol.E83-D, No.7, July 2000
- [4] World Ordering Business Agreement, SP to SP Ordering Information, TMF512, WOT Member Evaluation V1.0 Aug., 2000



1993 (    )

<            > Workflow Management,



1988 KAIST (    )

<            >            , ATM Service  
& Network Management