ITU Seminar

Bangkok, Thailand , 11- 15 November 2002

Session 2.3

**Network planning
at different time scales,
long, medium and short term**

Annex

**Network planning at different time scales as
seen in the evolution steps to NGN**

**In respect to strategies for introduction
of the new equipment**

**In respect to strategies for coexisting of
the present and future technology**

**Network planning at different time scales as
seen in the evolution steps to NGN**

**A next generation network (NGN)
is essentially characterized by packet-based
transport layer for voice and data and
separation of control and transport functions**

**Strategies for
migrating
TDM/PSTN
towards NGN**

**Evolution steps
to NGN**

Evolution steps to NGN :

Network architecture:

- ❑ **Existing legacy Telephony network architectures**
- ❑ **Data network architectures**
- ❑ **Data invasion of the telecommunication network**

❖ **Consolidation:**
   Optimization of the installed PSTN to reduce CAPEX and OPEX; can be combined with a selection of future-safe products to prepare migration to NGN

❖ **Expansion:**
   Keeping the existing PSTN infrastructure and services, but introducing an overlay NGN for addressing new customers and introducing new services
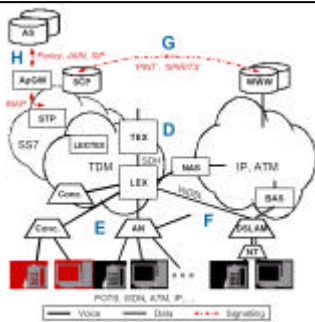
❖ **Replacement:**
   Replacing PSTN components (at their end-of-life) with equivalent NGN components
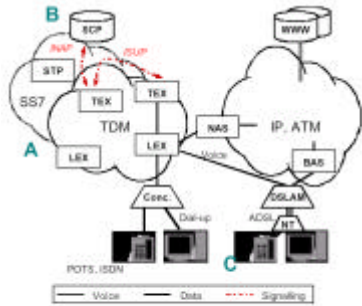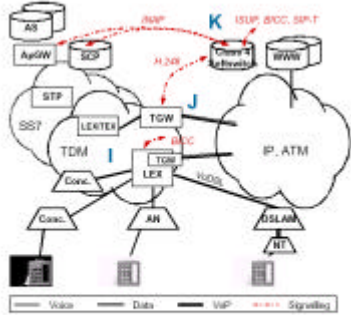
Evolution steps to NGN

Step 1 : PSTN for Voice and Internet
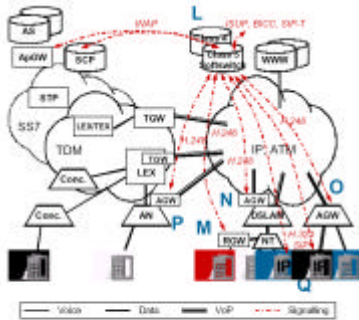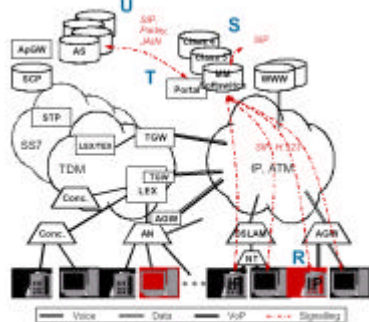
Evolution steps to NGN

Step 2 : PSTN Consolidation

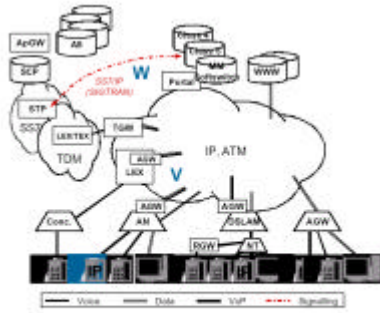**Evolution steps to NGN**

Step 3: Voice over Packet for Trunking

Evolution steps to NGN

Step 4: Voice over Packets in access and CPE

Evolution steps to NGN

Step 5 : Multimedia

Evolution steps to NGN

Step 6 : The full NGN

Teledensity statistics for different Asian countries

Main telephone lines

	Main telephone lines			Main telephone lines per 100 inhabitants		
	(k)		CAGR (%)			CAGR (%)
	1995	2001	1995-01	1995	2001	1995-01
Cambodia	8.5	33.5	25.6	0.08	0.25	20.1
Indonesia	3,290.9	7,949.3	15.8	1.69	3.70	14.0
Lao P.D.R.	16.6	52.6	21.2	0.36	0.93	17.2
Myanmar	157.8	281.2	10.1	0.36	0.58	8.4
Solomon Islands	6.5	7.4	2.2	1.73	1.60	-1.3
Viet Nam	775.0	3,049.9	25.7	1.05	3.76	23.7
Fiji	64.8	90.4	5.7	8.39	11.00	4.6
Papua New Guinea	43.6	64.8	8.2	1.07	1.35	4.7
Philippines	1,409.6	3,100.0	14.0	2.05	4.02	11.8
Samoa	7.8	10.0	4.2	4.73	5.56	2.7
Thailand	3,482.0	5,973.5	9.4	6.06	9.39	7.6
Vanuatu	4.2	6.8	8.2	2.49	3.36	5.1
Malaysia	3,332.4	4,738.0	6.0	16.57	19.91	3.1

Teledensity statistics for different Asian countries

Cellular subscribers

	Cellular mobile subscribers					As % of total telephone subscribers
	(k)		CAGR (%)	Per 100 inhabitants	% Digital	
	1995	2001	1995-01	2001	2001	2001
Cambodia	14.1	223.5	58.5	1.66	...	87.0
Indonesia	210.6	5,303.0	71.2	2.47	...	40.0
Lao P.D.R.	1.5	29.5	63.6	0.52	100.0	36.0
Myanmar	2.8	13.8	30.7	0.03	...	4.7
Solomon Islands	0.2	1.0	27.0	0.21	...	11.6
Viet Nam	23.5	1,251.2	94.0	1.54	...	29.1
Fiji	2.2	76.0	80.5	9.25	100.0	45.7
Papua New Guinea	-	8.6	-	0.18	-	11.7
Philippines	493.9	10,568.0	66.6	13.70	...	77.3
Samoa	-	3.0	-	1.67	...	23.1
Thailand	1,297.8	7,550.0	34.1	11.87	...	55.8
Vanuatu	0.1	0.3	19.4	0.17	-	4.9
Malaysia	1,005.1	7,128.0	38.6	29.95	...	60.1