

**Summary
Of
AIAA ICSSC-21 Plenary-C “Broadband Services through Satellites in
Asia-Pacific”**

Mr. Yutaka Kazekami, Senior Editor, Space Japan Review, has organized this Plenary-C. Six prominent speakers from major Asian regional satellite operators presented their respective broadband service applications and strategies and introduced the current applications to audience. After presentations, all six speakers and Plenary Chair, Dr. Eui Koh participated panel discussion.

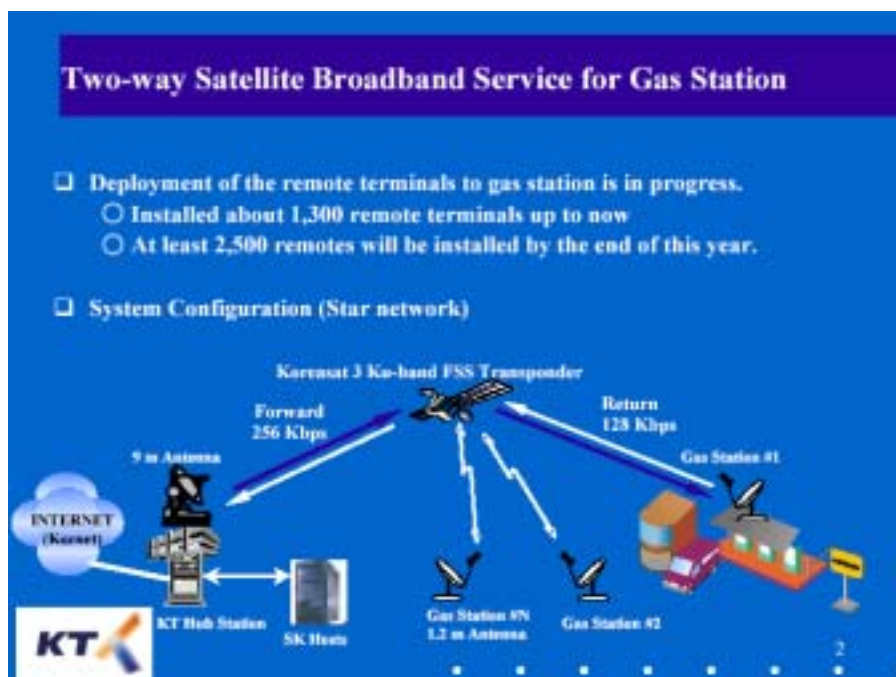
In panel discussion, questions were raised why satellite based broadband service applications didn't take off to become popular services. Consensus from speakers was two folds; price of ground terminal, still too high, and lack of two-way service availability via satellite. In another opinion, due to unexpected disaster by either natural or terrorism, satellite will provides a national disaster recovery networks to terrestrial network. As a conclusion, the panel was well attended and discussed freely and presentations were excellent. One thing is clear that broadband services via satellite are still evolving and it is only beginning.

1. KT

Dr Yoon Young-Jon, Managing Director, KT



Dr Yoon Young-Jon, Managing Director of KoreaSat of KT presented a KoreaSat's broadband application to South Korea Chemical Gas stations network over Korean peninsular on KoreaSat-3.



A total of 1,200 South Korea Gas stations are connected using Star VSAT network, 9mter hub station. The two-way systems, 256Kb in forward link and 128Kb on return link was supported by 2.4-meter remote terminal. The system performance is stellar. But he warned it wasn't easy to compete with terrestrial fiber network because Korea has a well-established Fiber network and price is quite competitive.

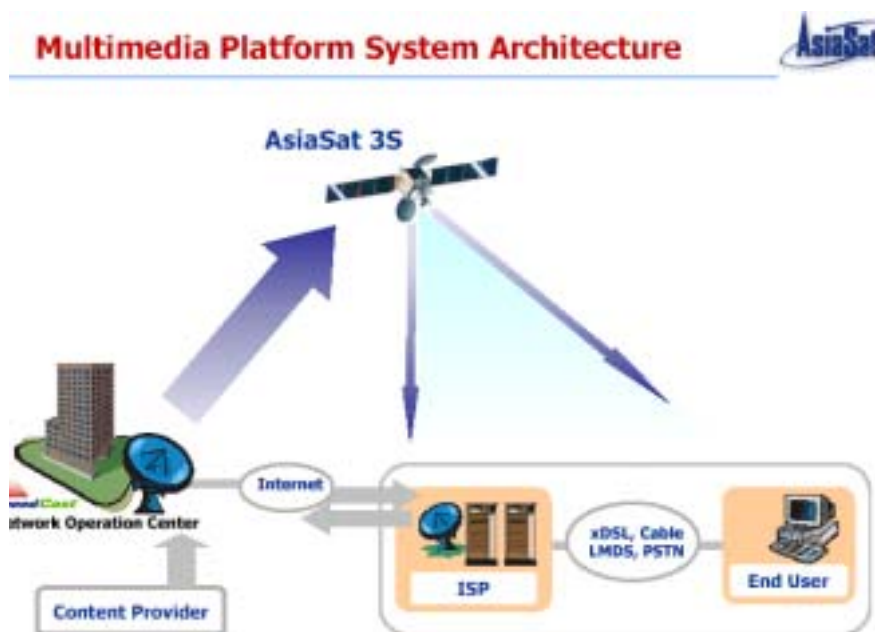
2. AsiaSat

Dr Ya-hui Chiu, General Manager Operations, AsiaSat

Dr Ya-hui Chiu of AsiaSat claimed demand of broadband service is high because Internet users requires high speed, high capacity transmissions and convergent applications by video data and telecommunications applications. Also he emphasized the fast content delivery to end users is a key factor.



He introduced a broadband service provider using AsiaSat-3, Speedcast. Throughout Asia, Speedcast provides content to end-users with 2.4-meter dish at remote terminal. The application includes educational institutions, SOHO/SME, cyber cafe; hotel chains corporations for their intra network. Also he announced a successful launch of AsiaSat-4 satellite.



3. JSAT

Dr. Yutaka Nagai, Senior Executive Officer, JSAT

Broadband Service Via Satellite

- Challenges at JSAT in Japanese Market -



2003.4.16

Yutaka Nagai

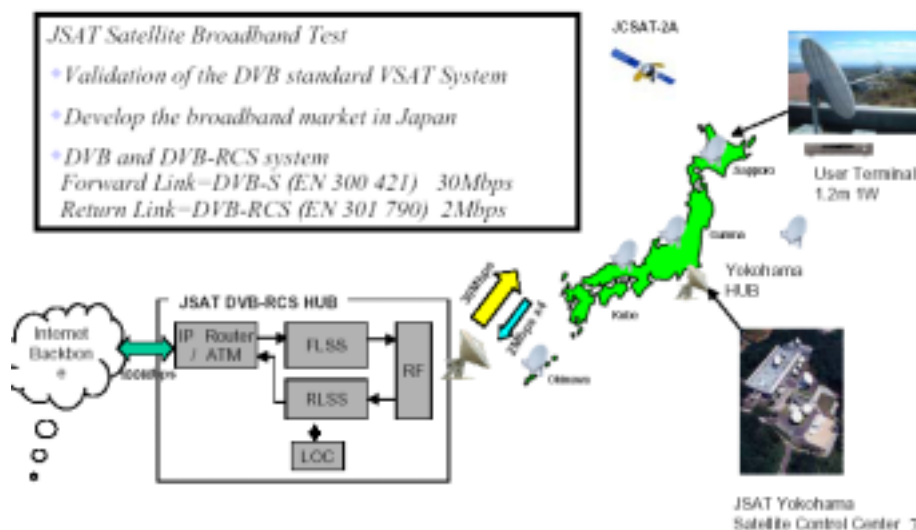
Senior Executive Officer

Business Development Group

JSAT Corporation

Dr. Yutaka Nagai, SEO of SAT, introduced a DVB-RCS based broadband VSAT network in 2002 offering 30Mb forward link and 2Mb return link on JSAT-2A satellite over Japanese territory using 2.4 meter dish remote terminal.

Broadband Satellite System Field Test



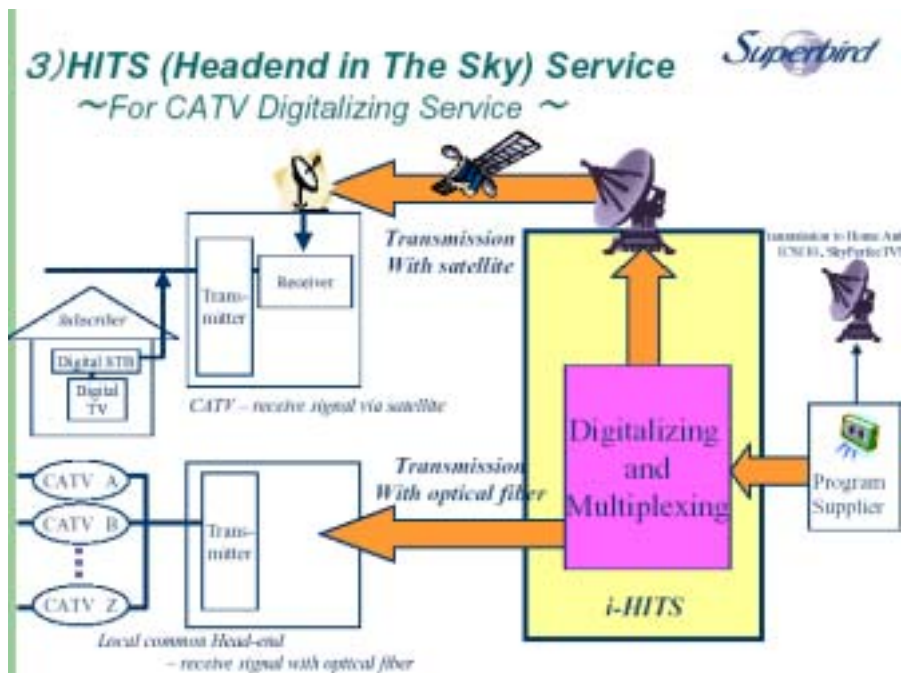
The field test was started in February 2003 and ready to be sometime in 2003. The applications is for SHO/SME, government network, video transmission, Mobile IP services and disaster recovery.

4. SCC

Dr. Hiroshi Kimura, Executive Vice President, SCC



Dr Hiroshi Kimura, EVP of Space Communications Corp presented overall SCC's strategy with four existing satellites.



And also he introduced HitPos, IP based broadband content delivery networks. Over SCC's content distribution network, HitPops, SCC is able to provide video, audio, games and software to various operators, like CATV, xDSL, Mobile and Corporate LANs. Also, he mentioned a VSAT based nationwide disaster recovery network is very desirable and satellite is an ideal candidate.

5. Binariang Satellite Systems

Dr. Ali Ebadi, Vice President Binariang Satellite Systems



Then, Dr Ali Ebadi, VP of Engineering and operation of Binariang presented the current status of satellite capacity availability in both C-band and Ku-band. He illustrated there is a glut of satellite capacity in Asia Pacific region.

Therefore satellite operators have choices to select the satellite manufacturers. And the price is buyer's market in satellite industry. Also he claims that there are too many satellite manufacturers and launch vehicle service providers as well. He claims MEASAT 1 and 2 are almost full and they awarded a contract for MEASAT-3 to be launched next two years.



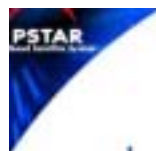
MARKET FORECAST

Transponder Demand (1996-2010)						
Based on 36 MHz Equivalent Bandwidth						
	1996	1997	1998	1999	2000	2005F
Transponder Utilization by Region						
North America	932	943	1112	1296	1464	1627
Latin America	408	432	511	590	629	803
Western Europe	727	751	825	910	984	1382
Central and Eastern Europe	173	130	180	248	339	499
Africa and Middle East	246	251	274	305	368	532
Southern Asia	161	162	164	174	196	268
Asia-Pacific Region	835	979	1038	1116	1190	1958
Total Utilization	3482	3639	4104	4639	5200	6526
Transponder Utilization by Application						
Voice and Data except Internet	1322	1393	1555	1717	2140	1996
Internet Linking	0	0	72	211	242	888
Direct Internet Access	0	1	11	23	62	643
Television and Video Feeds	2160	2245	2465	2688	2766	3985
Subtotal	3482	3639	4104	4639	5200	6494
On-Board Processing Capacity	0	0	0	0	0	32
Total Utilization	3482	3639	4104	4639	5200	6526
Percent Annual Change	4.4%	4.5%	12.8%	13.0%	12.1%	4.7%
Units Added per Year	+147	+157	+465	+535	+561	+265

Source: Eurocomsat - Satellite Communications & Broadcasting Market Survey (Worldwide Prospects to 2010)

6. Shin Satellite

Dr. Nongluck Phinaitisart, President Shin Satellite



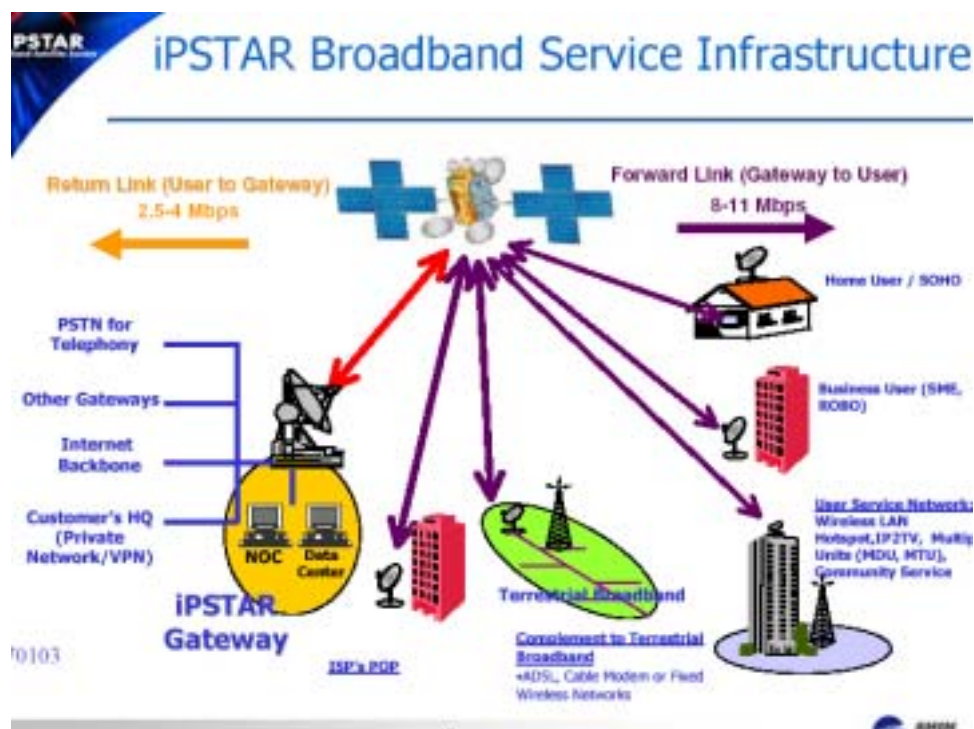
iPSTAR Introduction

Nongluck Phinaitisart, D. Eng
President
Shin Satellite PLC.

AIAA 21st. International Communications Satellite
Systems, Conference and Exhibit
April 15-19, 2003 Pacifico Yokohama,
Yokohama, Japan



Dr Nongluk, President of Thailand based Shin Satellite presented their much heralded iPStar satellite and its services.



She explained a uniqueness of satellite payload using the state of art technology and the satellite will offer 45GB compared with the maximum 2Gb capacity of the conventional bend-pipe satellite. She was confident the satellite is innovative and the special kind of satellite and it can provide enormous two way broadband services throughout Asia.