



Mutually Beneficial Partnership between Taiwan and United States on Communication Industry

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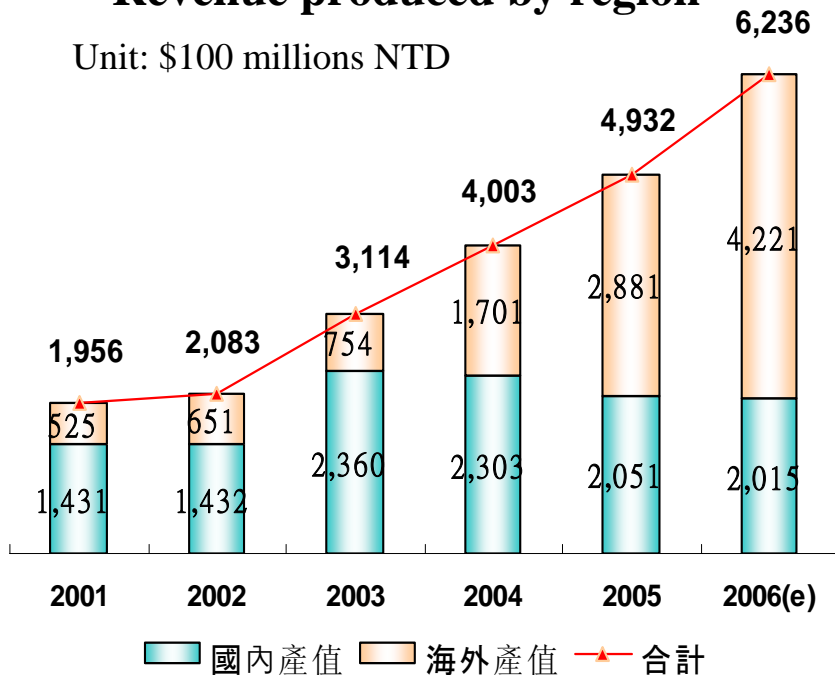
OUTLINES

- **Status of Taiwan Communication Industry**
- **Market Opportunity for US**
- **Restriction and Possible Resolution Through FTA**
- **Conclusions**

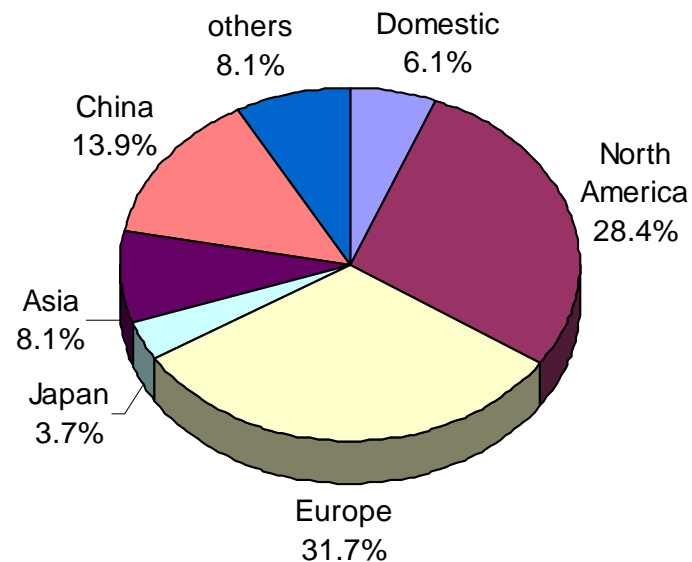
Communication Equipment Produced by Taiwanese Companies

Revenue produced by region

Unit: \$100 millions NTD



2005 Revenue sold by region



- 2005 Total revenue: \$15.4 Billions USD (493.2 Billions NTD), Growth rate: 23%
 - ODM : 60%
 - Terminal equipment: 58%
 - Manufactured outside of Taiwan: 52% (Mostly in China)
 - Products sold to Europe: 31.7%, US: 28.4%
- 2006 Total Revenue (estimated): \$19.5 Billions USD, Growth Rate: 26%

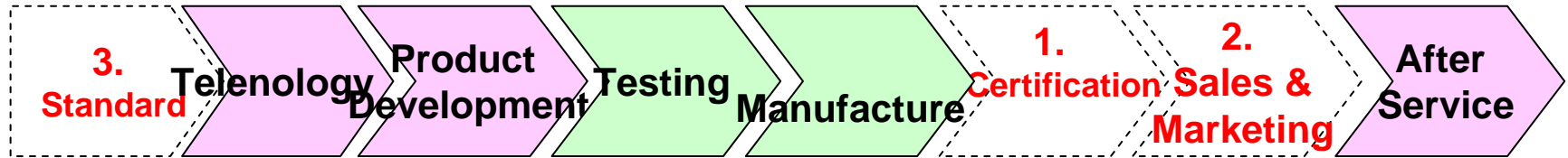


Communication Equipment Produced by Taiwanese Companies

Category	Products	2005 Revenue (Billion \$USD)	2005 Growth Rate	2005 Revenue %	2004 Revenue %
Local Area Network	Ethernet Switch, Hub, SOHO Router , NIC...	1.98	1.7%	25.9%	28.4%
	WLAN.	2.00	24.5%		
Terminals	Analog Modem, Desk phone, Fax, IP Phone, Video Phone	0.86	3.6%	58.6%	57.2%
	Mobile phone, GPS , Pager	8.16	29.1%		
Transmission & Switch	Fiber Optic Equip., Switch, DLC...	0.38	21.1%	2.8%	3.1%
	Wireless Communication	0.05	-17.0%		
Broadband Access : xDSL 、 Cable Modem...)		1.95	38.9%	12.7%	11.3%
Total		15.41	23.2%	100.0%	100.0%



Value Chain & Areas for Partnership



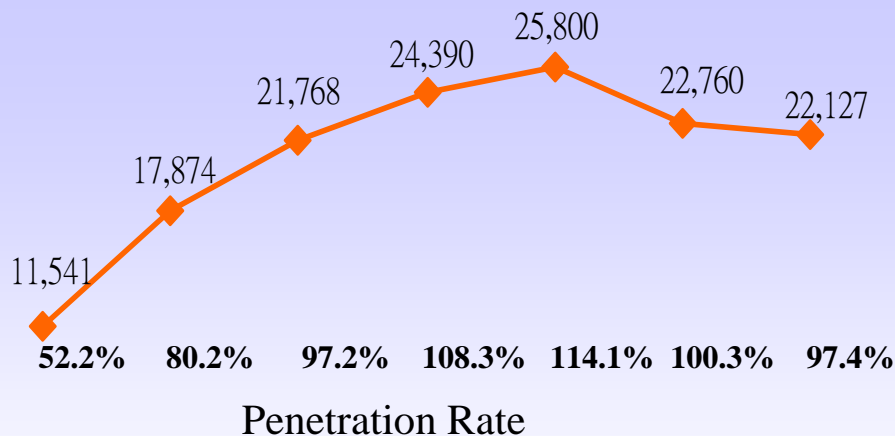
Areas of Opportunity for US

- 1. Certification: Regulatory and Tech Spec. Verification**
- 2. Sales and Marketing including Network System Integration: Taiwan manufacture is strong on ODM.**
- 3. Standardization: Co-define technical specification and IPR**

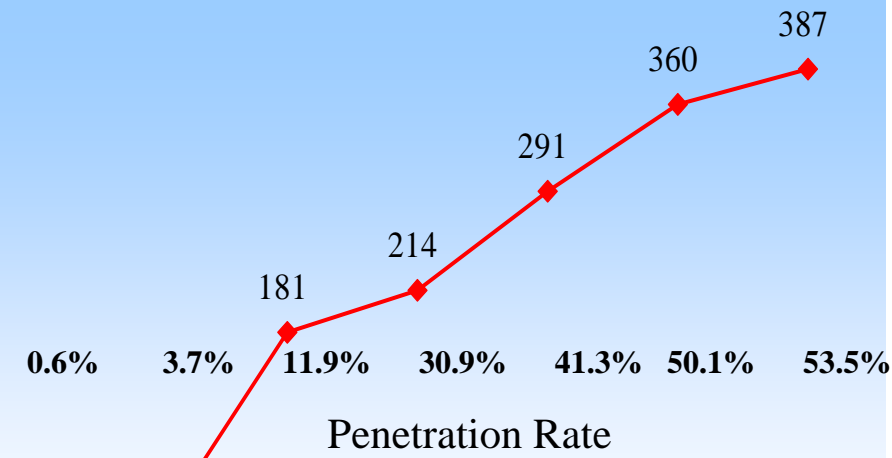


Taiwan Telecom Service Market

Mobile Subscribers (thousands)



Broadband Subscribers (10 thousands)



- Three 2G operators, Five 3G operators, 1 PHS

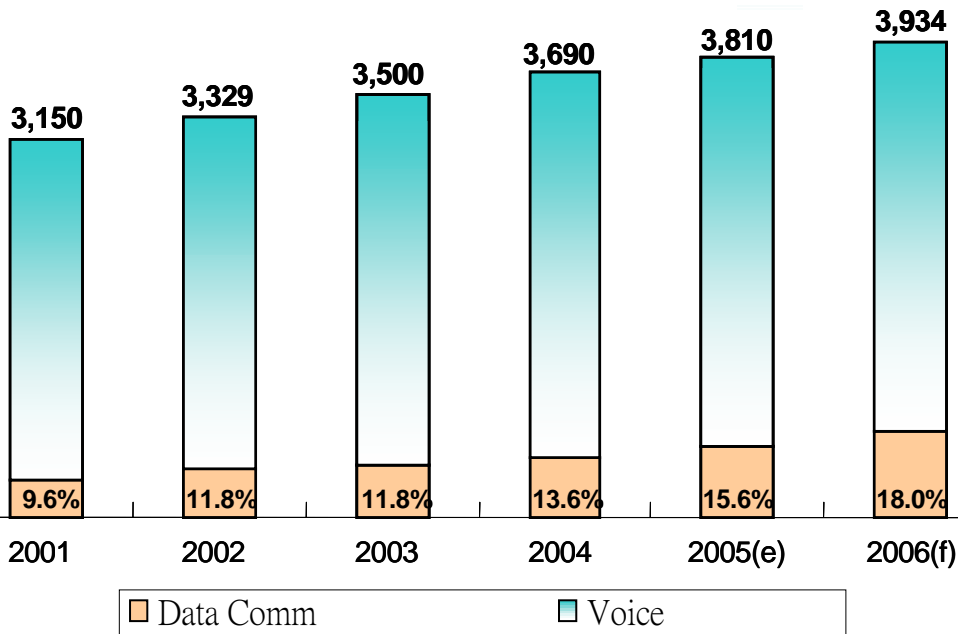
- 88% of Broadband subscriber are ADSL By 2005/6
- 61% of speed is 1.5 Mps and above



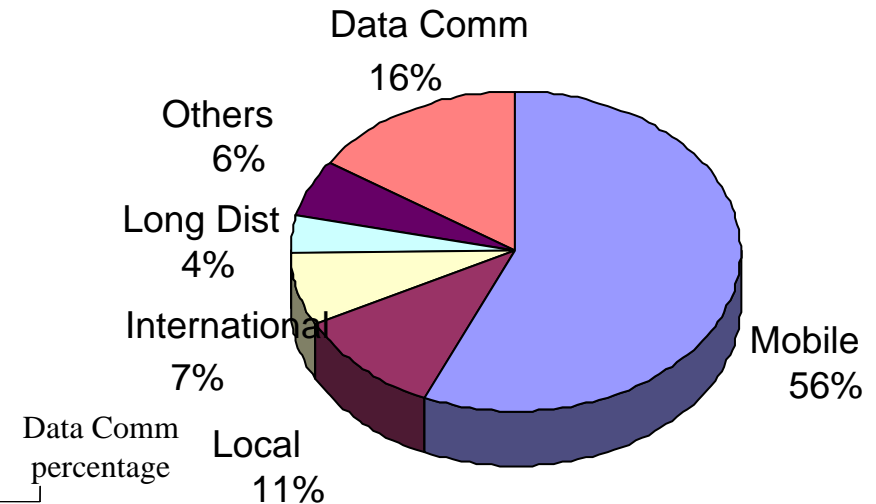
Taiwan Telecom Service Market

Telecom Service Revenue

單位：億新台幣



Telecom Revenue by service type



- ❑ 2005 Total Market Revenue \$11.9 Billions (\$381 Billion NTD), Growth Rate 3.3%
- ❑ Mobile Service: 56%, Growth Rate 3.6%
- ❑ 2005 Data Comm Revenue: \$1.85 Billions (59.4 Billion NTD), Growth Rate: 18.8%
- ❑ Total Net Profit is over \$2.5 Billions USD (market is not saturated)



M-Taiwan:

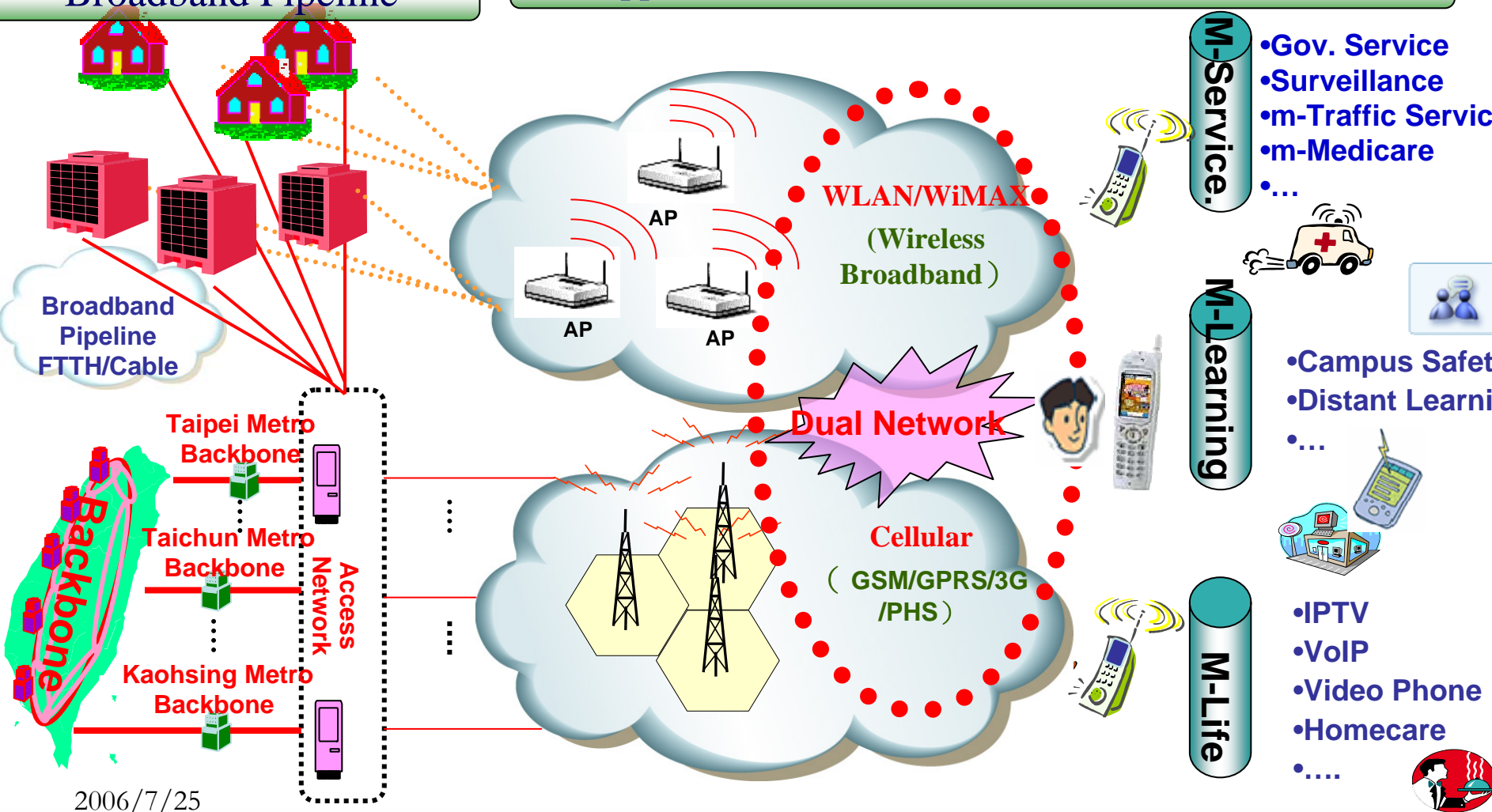
A National Program for 8 Millions BB Subscribers by 2008

1 Billion \$USD

220 Million \$USD

Broadband Pipeline

Mobile Applications and WiMAX/WLAN-Cellular Dual Network



2006/7/25



Wireless Taipei City

Winner of Intelligent Communities of 2006



Schedule	Tendered RFP in May 2004 . The network infrastructure is now under construction
Business Model	Signed a 9-year BO (Build-Operate) contract with Qware System in Sept. 2004 to design, construct (by Nortel), manage and maintain this wireless network, and provide service.
Deployment Cost	\$ 90 millions (USD) for the whole network of 10,000 access points (expected)
Applications	VoIP, multimedia service, SMS, remote security system, online learning
Technology	Wi-Fi access with WiMAX backhaul, data transmission speed exceeding 0.5 Mbps per user



Source : IEK/ITRI (2004/12)



Opportunity for US (Equipment)

- **WiMAX & FTTH Technology**
 - Co-define Technical Specifications
 - Innovative Broadband Applications (IPTV, Video, Security,..)
 - Network Elements
- **Certification and Verification:**
 - Testing Equipment, Setting up Test Lab...
- **Sale and Marketing**
 - Telecomm Network System Integration
 - Total Solution: US Network system + Taiwan CPE
- **Potential Addressable Market in 2008: \$40 Billions USD**



Opportunity for US (Service)

- **Join Venture as Network Operator**
 - New WiMAX opportunity (License to be issued by 1Q07)
 - Type I Operator (owning facility for transmission, central office equipment)
 - Full service
 - Local
 - Long Distance
 - International
 - Type II Operator (No Foreign Investment Limitation)
 - Resale and Virtue Network Operator (MVNO, i.e., Virgin Mobile)
 - Value Added Service Provider
 - Internet Access Provider
- **Content Aggregator or Broadband Service Provider**
 - Like ESPN, Disney Mobile, Yahoo Mobile...
 - Like, Fon, Vonage, Clearwire....
- **Broadcast, Media and Contents**
 - Disney, Time Warner,....
- **Potential Market Size in 2008: \$30 Billions USD**

Restriction and Possible Resolution



Through FTA

- **Restriction on Foreign Investment for Type-I Communication Services (Fixed Line, Cable, Satellite):**
 - Direct Investment Limitation: 20% → 49%
 - Total Limitation: <60%
 - 2 out of 60 Type-I operators reaching 60%, 3 Operators over 20%
 - Remove Constrain on the Nationality of Board of Directors
- **Restriction on New Permit for Type-I Fixed Line Service**
 - Open Up Full Service Operator Permit on 2004
 - Open Up Long Distance, Local, International Service Permits on 2005
- **No Limitation on Type-II services (Internet Access, MVNO, Value Added Services)**



Restriction and Possible Resolution Through FTA

- **Restriction on Broadcasting Services**
 - Improve Cable Broadcasting: <60% Foreign Investment, <1/3 Number of Directors
 - Improve Satellite Broadcasting: <49.99% Foreign Investment

- **Clarification on the Regulation for Converging Broadcasting, Media and Telecommunication**
 - National Communication Commission (NCC) has been formed to stream line the rules and regulations governing the industries.



Conclusions

- **By Combining both Country's Strengths (US: IPR + Sales Marketing + System Integration, Taiwan: Terminals + Manufacturing), US and Taiwan Will Be an Unbeatable Force. Taiwan Will Serve US as a Gateway to Export her Products and Services to Asia-Pacific Region and the Rest of Globe.**
- **With M-Taiwan Program and Wireless Cities Deployment, Taiwan Will Create a \$70 Billion Worth of Equipment and Service Market by 2008.**
- **Although Taiwan Telecom Penetration Is High, the Net Profit for the Service Market Is Lucrative (\$2.5 billions per year). Foreign Investment in Capital and Expertise to Increase Competition Is Welcomed.**
- **Ease the Regulation Constrain and Form NCC to Clarify the Rule for Converging Broadcast and Communication, Thus, Move the Industry to a More Friendly Free Trade Environment**