

EMBLEM SYSTEMS

*A VIEW OF HOW PROPERTY DEVELOPMENTS &
FTTH ARE WORKING TOGETHER*

Topics

1. Who is FTTH Council APAC?
2. Key Challenges of FTTH Deployment
3. Emblem systems around the world
4. Benefits to all parties
5. Sample case study in Taiwan

FTTH Council Asia-Pacific

Source: FTTH Councils (march 2010)



Role of the FTTH Council Asia-Pacific

About Us:

Non-Profit Organization since March 2005

Mission :

To educate, promote and accelerate FTTH and the resulting quality-of-life and economic benefits.

Objectives :

- Supply a consistent and accurate view of FTTH
- Promote FTTH market development
- Be recognized by the industry as the FTTH resource



Organisation of the FTTH Council AP

Board of Directors

Advisory Committees

- Finance
- Membership -Encourage the growth of membership

Working Committees

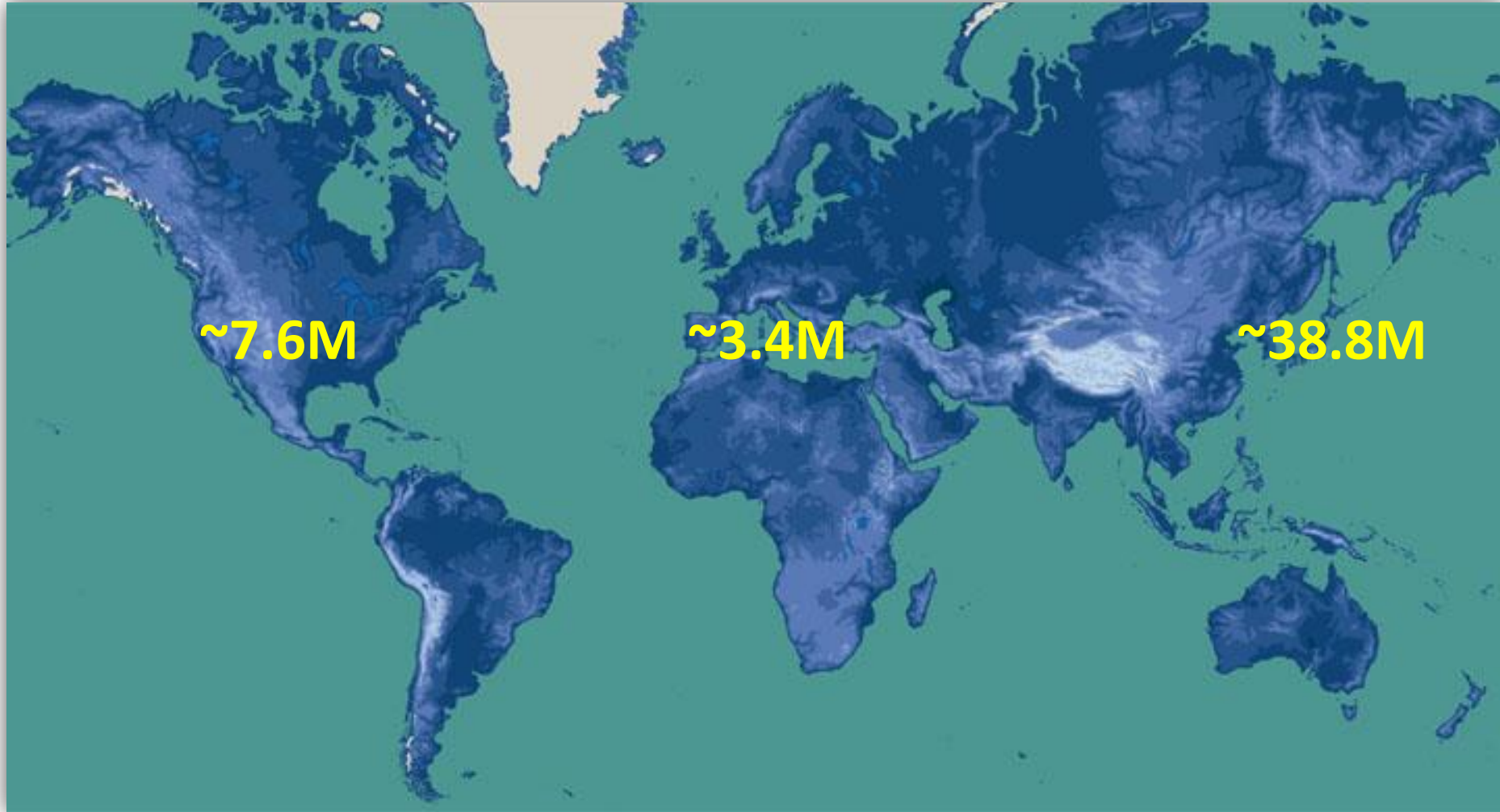
- Planning and Events
 - Plan/coordinate general membership activities, meetings & conferences
 - Coordinate reactive and proactive public relations
- Market Development
 - Provide a common understanding of the customer segments and their requirements and the size of the FTTH industry and market
 - Promote the markets development through promotion and communications

Organisation of the FTTH Council AP

Working Committees (cont)

- Technology and Architecture
 - Promote the awareness and business implications of active systems, passive components and deployment techniques for FTTH networks
- Regulation and Policy Committee
 - Promote and coordinate regional, geographic and governmental issues in order to facilitate the introduction and growth of FTTH in the region
- Education & Training Committee
 - Created to promote the FTTH Council APAC as trusted & impartial central source for knowledge, facts, education and perspectives o FTTH

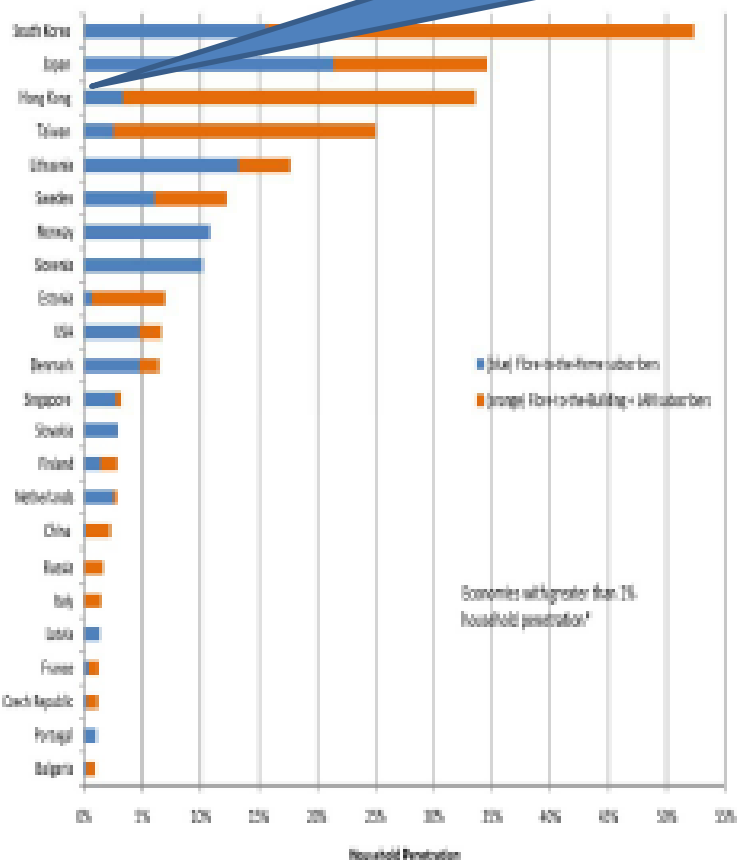
FTTH Subscribers Connected (March 2010)



FTTx Global Ranking

1. South Korea
2. Japan
3. Hong Kong
4. Taiwan

Economies with the Highest Penetration of FTTH/B



FTTH continues its triumphant success around world

- > 6M new subscribers added in 2H09
- South Korea, number one (penetration)
 - First country > 50% of HH using FTTH/B
- 23 countries ^[1] qualifying
 - Only 7 of “world leading economies” (G20)
- Top five Global economies (subscribers):
 - Japan, China, South Korea, USA, Taiwan.
 - Represent > 90% of all FTTH/B subscribers
 - Only countries with > 1M HH connected

Which countries will succeed with FTTH?

Analysing the characteristics of countries that are successfully deploying FTTH, it is clear that successful countries :

- Have Government and Regulatory commitment to FTTH.
- Have strong user demand for broadband services.
- Have a competitive broadband market.

<http://www.ftthcouncilap.org/>

What are the key challenges?




The Key Challenges of FTTH Deployment – THE 5Cs

COMPETENCY

Manpower need to be competent to deploy the network



CONTENT

Local content provider need to develop the local content to reduce international traffic and enjoy high speed 

Customer Awareness
Is the customer ready for FTTH?



International P2P and user generated content

CONSUMER EQUIPMENT

Consumer needs digital home equipment to fully enjoy the excitement of large bandwidth applications (i.e. HDTV, home automation, etc)

CIVIL & CONSTRUCTION

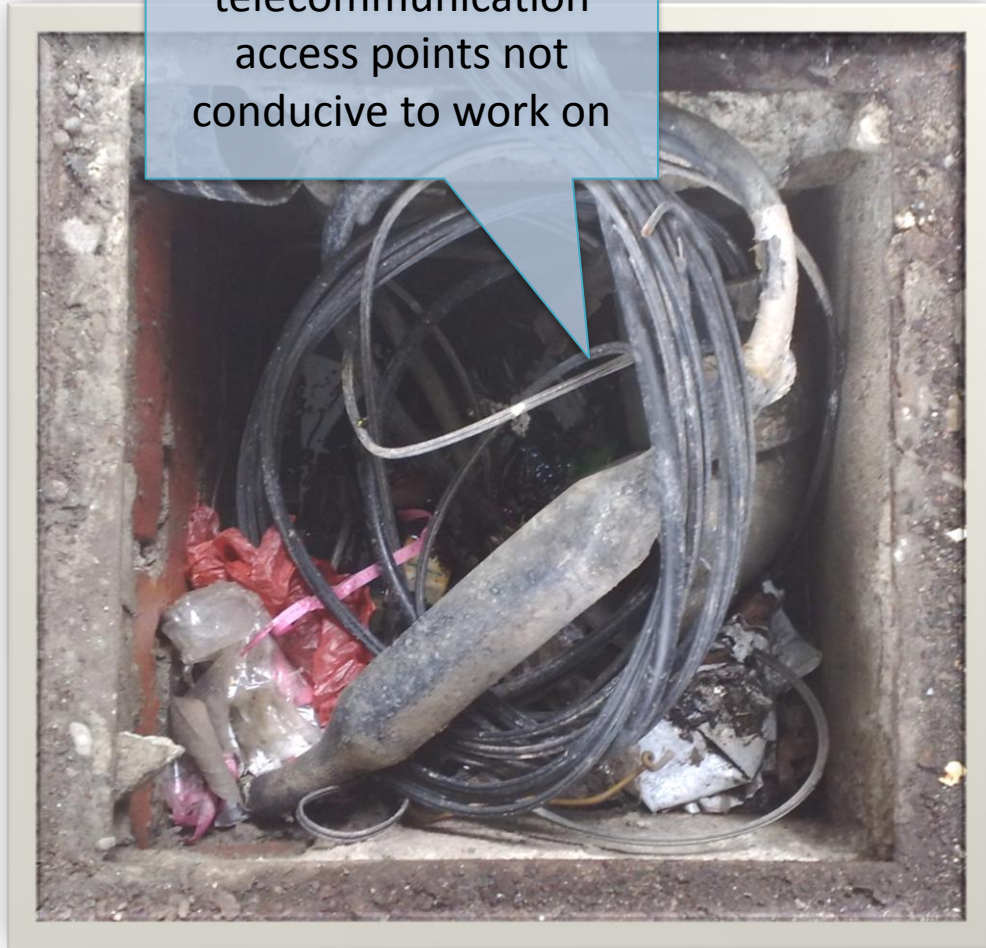
New guideline and best practices are required to deploy fiber up to the customer premises

CIVIL & CONSTRUCTION

- **Majority of brownfield areas suffers from access issues such as blocked or collapsed ducts especially for the drop section from the Fibre DPs to the customer premise.**
- **Within the customer premise, raceways would have to be installed to allow the fibre be installed on the interior walls instead of through wall cavities thus deterring take-up**
- **Lack of dedicated space to place fibre distribution cabinets and DPs has resulted in extensive negotiations with property owners to obtain permission for the use of certain locations**
- **Access ducts blockage between hand holes has been encountered in several occasions thus requiring trenching/slot cutting to be performed**

CIVIL & CONSTRUCTION ISSUES

Lack of care by property owners has rendered telecommunication access points not conducive to work on



Silt over the years has blocked majority of the underground ducting

CIVIL & CONSTRUCTION ISSUES



Lack of care by property owners has rendered telecommunication access points not conducive to work on

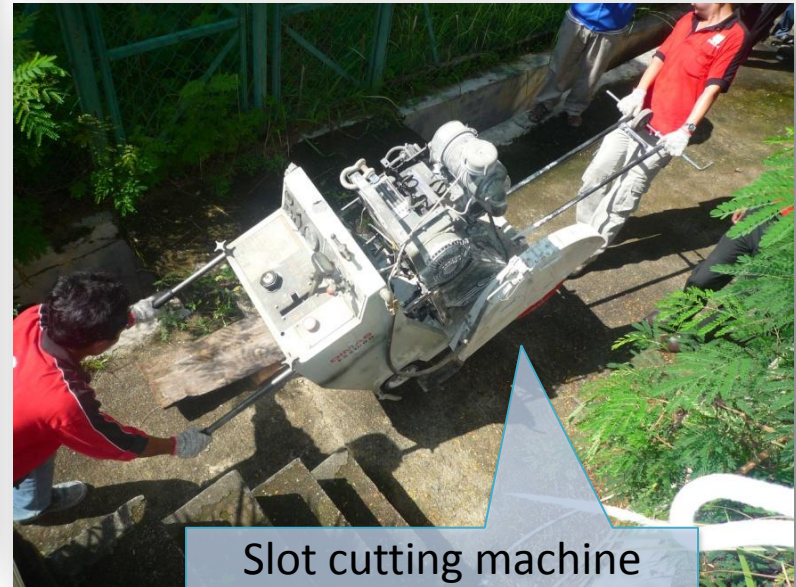
CIVIL & CONSTRUCTION ISSUES



Vertical saw cut into external wall of customer premise to allow installation of new ducts



Installation of raceways at customer premises

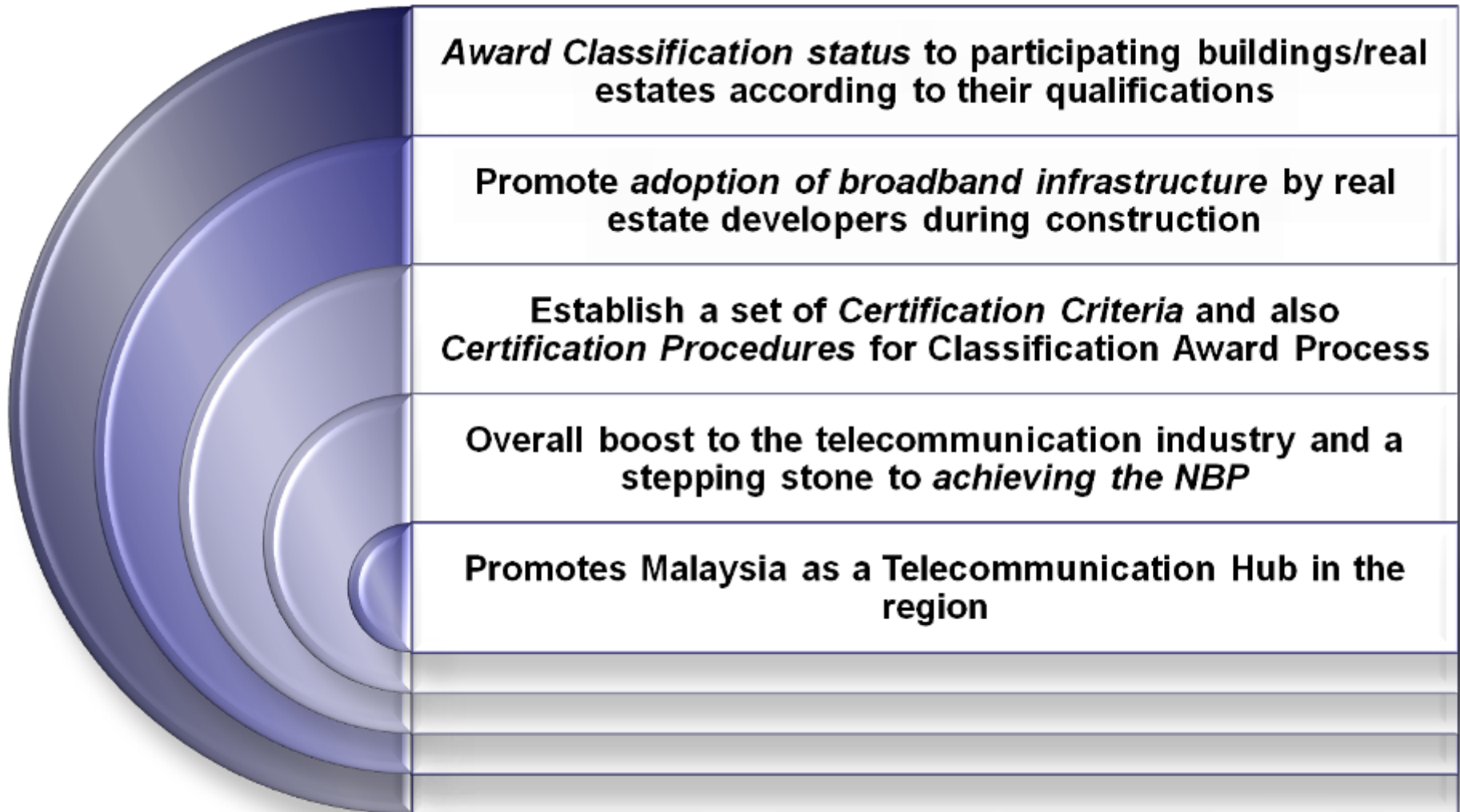


Slot cutting machine wheeled into position

There is a thought...



Classification/Emblem Concept



Success of Similar Concept in Korea



Special Grade
(New construction)

First Grade

Second Grade

Third Grade

Authentication mark (Emblem)



Speed

1Gbps level

100Mbps level

100Mbps level

10Mbps level

Guideline
for
High-Speed Information
Telecommunication Building

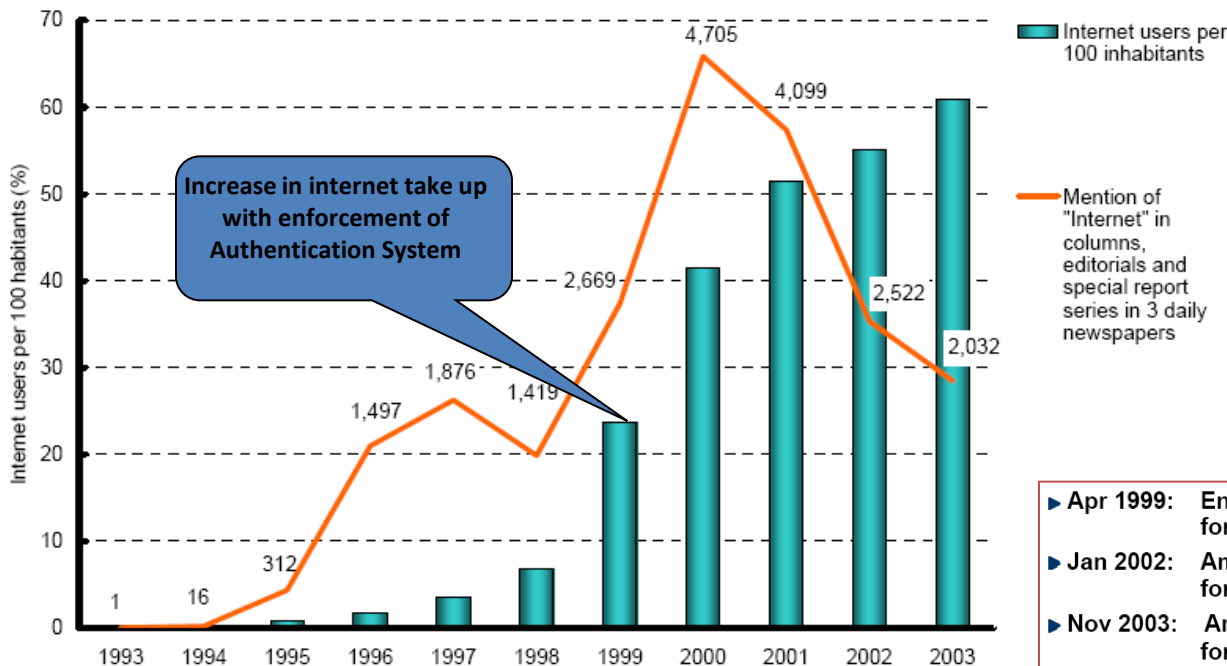


1. Jan. 2006

LS Cable

MIC MINISTRY OF INFORMATION AND COMMUNICATION REPUBLIC OF KOREA

Emblem Concept is **championed** by the government



- ▶ Apr 1999: Enforced Authentication System for High-speed Information & Communication Building
- ▶ Jan 2002: Amended Guide-Line for Authentication System for Adding the OfficeTel
- ▶ Nov 2003: Amended Guide-Line for Authentication System for Adding "Special Grade" for MDU
- ▶ ~Sep 2005: 1.9 Mil Homes through 3,800 Application to be Authenticated

Success of Similar Concept in Taiwan



遠雄房屋

堅持專業·不斷超越



- 預約U未來 洽購專線：02-26081188

▶ 十大特色 ▶ 交通生活 ▶ 建築規劃 ▶ 建築團隊 ▶ 業績實景

松下屋 指靜脈 遠端控制系統 數位MOD 遠端照護系統

Digital Home, Live in Future

遠雄數位家庭原創，台灣建築革命大世紀

遠雄深信，家是數位生活的起點，遠雄數位研發團隊，跨海與日本HITACHI、松下PANASONIC考察交流。到領域與中華電信、遠流出版社攜手合作，全國原創，第一座超進化光纖城市，在未來市開始！

2005.02「數位家庭」夢想實現：唯一播進電腦多媒體展，展出未來概念屋

與大亞電腦、英特爾合作，於多媒體電腦展展出未來數位媒體中心(FIC Spectra)未來屋，數位科技綠不在的未來屋中，一舉啟動台灣居家革命。

2005.05「未來數位家庭」首部曲：無線寬頻的世界

遠雄結合中華電信、D-Link友訊科技、遠流出版社...等科技龍頭，正式發表「數位家庭未來城」，將「數位家庭」在台灣第一次真實呈現。

22005.07「未來數位家庭」二部曲：神奇的遠端監控，家就在手掌心

享有歐美軟體做比圖、幕幕的科技生活，透過手機螢幕可遠端監控屋況，像隻手摺，居家生活一手掌握。

2005.08「未來數位家庭」三部曲：0~100歲的數位生活，沒有圍牆的學校

遠雄率先與遠流知識家聯手合作，透過數位軟體、開資料全書網、數位內容網以及遠端未來書海...等內容完美結合，建構全國第一座數位家庭、人文遠端社區發展。

2005.10「未來數位家庭」四部曲：啟動光速住宅時代，台灣首座FTTH「光

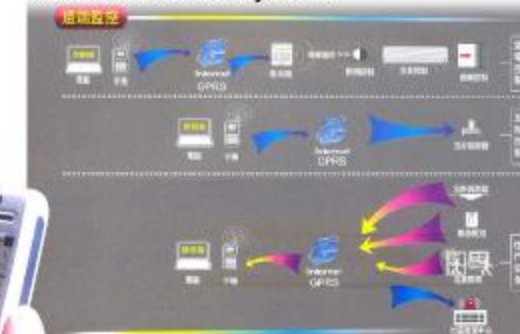


Certification System in Taiwan



Digital Home with FTTH

Distant Control System



- Although not enforced but by embarking on the concept of 'Digital Home', property developers such as Farglory has make its mark the urban regeneration and real estates (both residential and commercial) under their name are selling like hot cakes

Appreciation of Real Estate with Broadband Facilities



- Loma Linda Community City Council supports FTTH program for new real estate projects.
- By having FTTH infrastructures, **the real estate price has risen between US\$4000 – US\$14000.**



- Aurora FTTH case study performed by the Council of Victoria, Australia shows that broadband is the next 'utility'.
- Developers who have ignored the FTTH trend find themselves **selling their properties at discounted prices of at least AUS\$5000.**

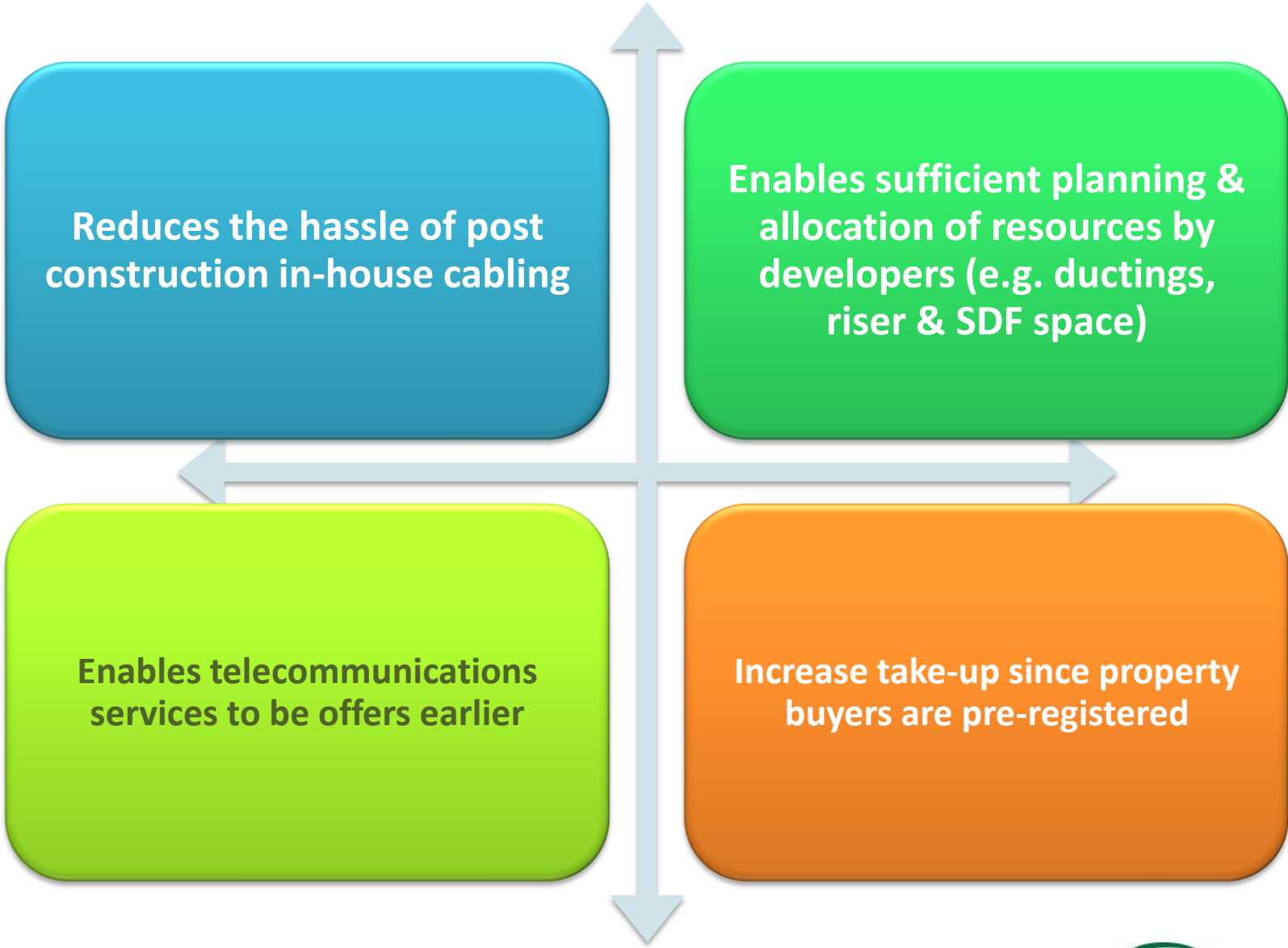


- Real Estate developers found that **Broadband ready properties are soon sold out** sooner after launching as compared to conventional properties.
- Also FTTH supports the idea of digital home which in turn open up vast markets for new high tech products.

What are the benefits?



Benefits to Telco



Benefits to the country

Accelerates the NBP by ensuring the availability of infrastructures

Attracts foreign business investors to the country by having a HSBB ready infrastructure

Realization of e-Government and as a nurturing ground for locally developed technologies

Encourages telecommunication industry (both local entrepreneurs and foreign investors via collaboration & joint ventures)



**Suruhanjaya Komunikasi &
Multimedia Malaysia**

Benefits to Property Developers



*Increases property sales value (properties appreciate by *3%~8% with HSBB ready infrastructure)*

Commercial/Sales advantage over developers who are reluctant to adopt the HSBB concept

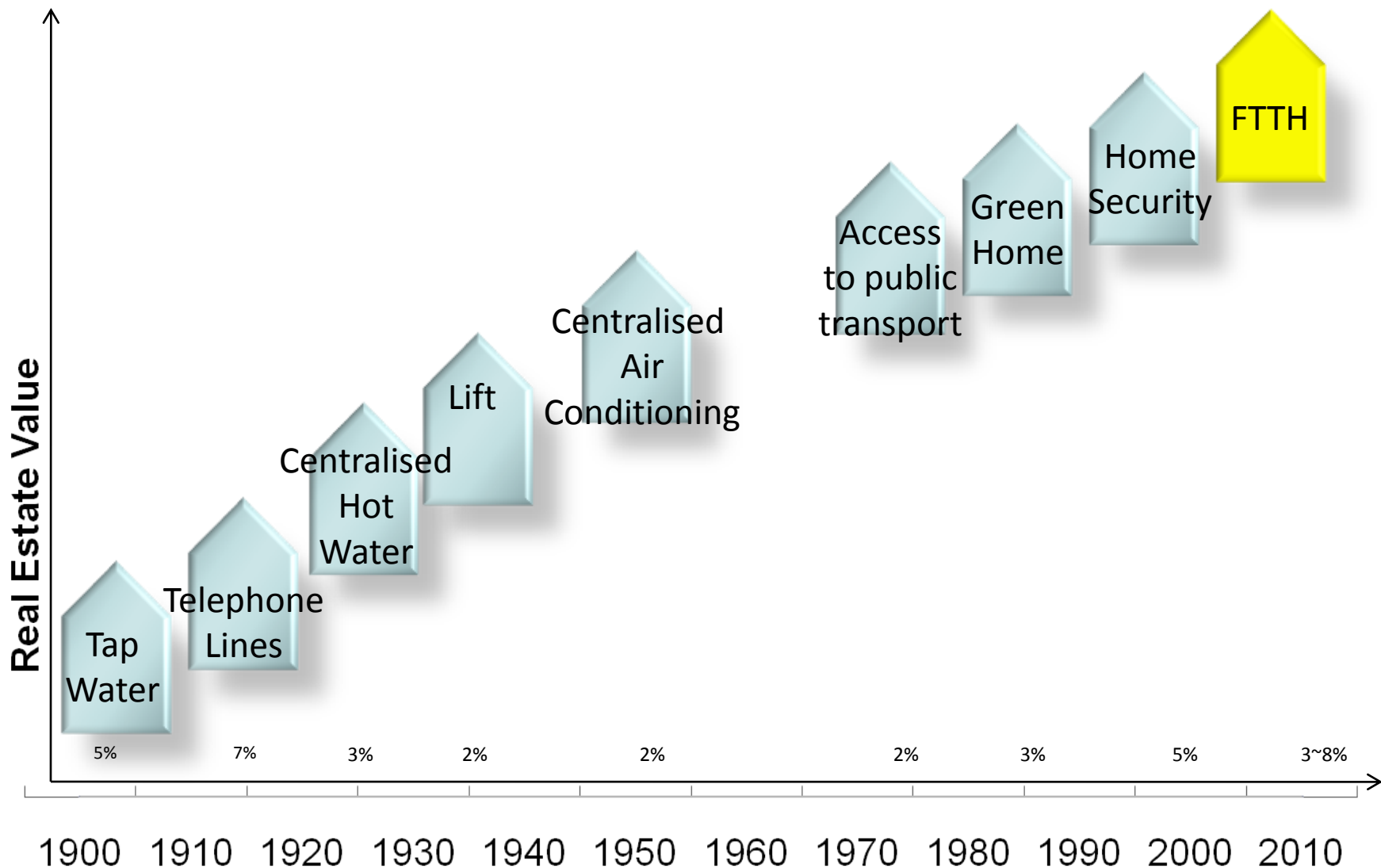


Increases leasing value of both commercial and residential properties

Corporate Visibility as a leader in the industry



Value add to real estates



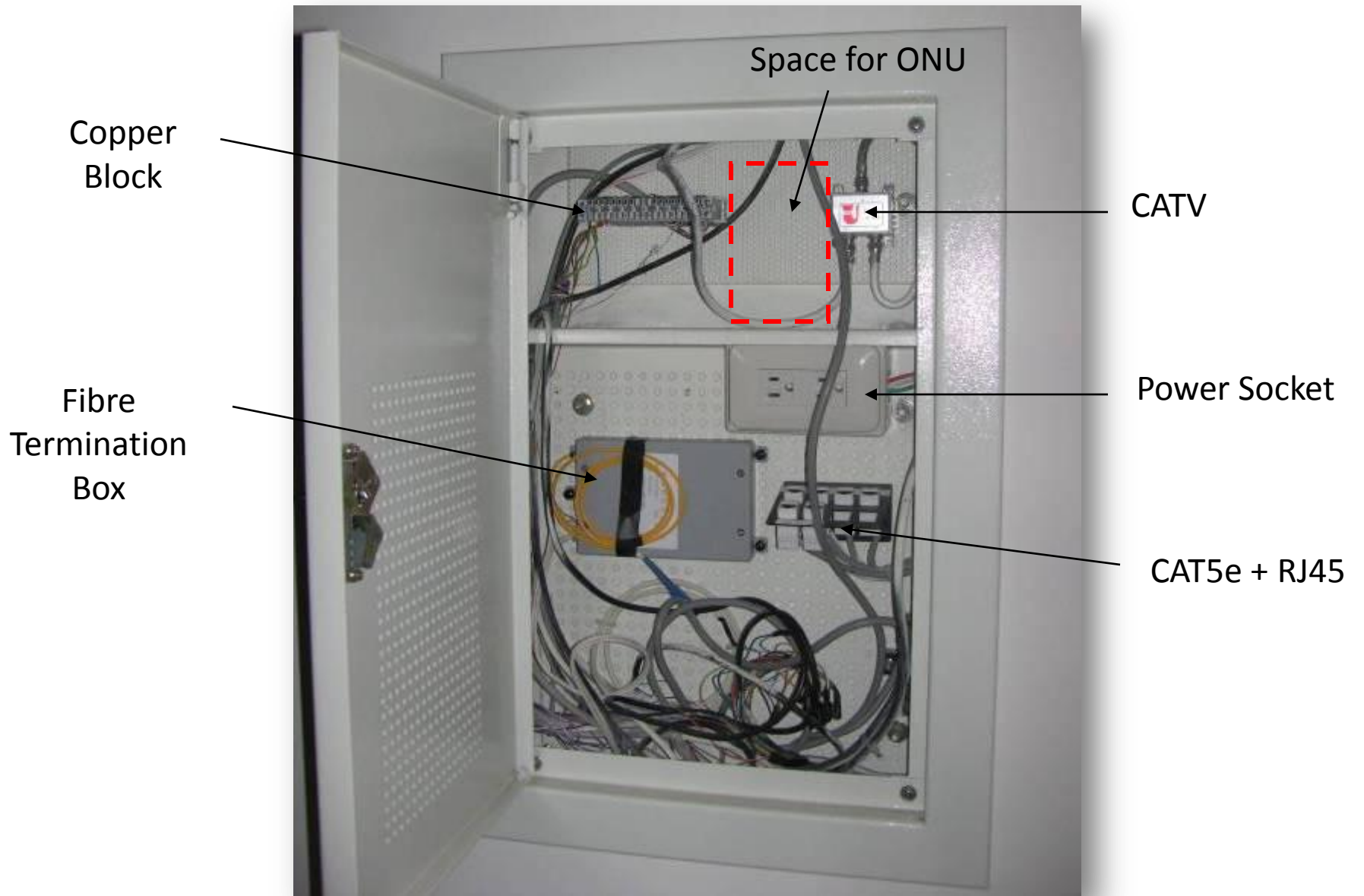
Case study....



Visit to Site at LingGou

- Real estate developer paid to build the network
- Developer is tied in with a 2 year contract with CHT as well
- Real estate developers are sure of the standards of their building since it is built by CHT





Completed Unit

Concealed CAT5e cabling from the ONU to the rest of the apartment unit via wall sockets



SDF room at basement with both copper & fibre equipment



Incoming fibre + Splitter



Centralized distribution cabinet serving
>1000 units

In a nut shell...

1. The emblem/classification system has been proven in many countries as a successful catalyst in promoting FTTH penetration
2. To be successful, it requires all parties to participate in this effort
3. In the end of the day, everyone stands to benefits and it will open definitely open up new doors to new possibilities



see the *Light*



With the unrivalled bandwidth of fiber coming soon to a home near you.....

**FTTH Council Asia Pacific
6th Annual Conference and Exhibition 2011
in New Delhi, India**



- Date** : 25th ~ 26th May, 2011 (Wed. ~ Thurs.)
27th May, 2011 (Fri.) Optional Tour
- Venue** : Taj Palace Hotel – Exhibition & Conference
Taj Palace Hotel – Gala dinner

