

The Process of extending broadband Internet coverage to every Village

NCC

October 2007

Outline

- ◆ **Origin and Authority of NCC**
- ◆ **Establishment of Universal Telecommunications Services**
- ◆ **Highlights of Telecommunications Universal Services Fund**
- ◆ **Data Communications Access Universal Services**
- ◆ **Case Studies**
- ◆ **Practical Effect**
- ◆ **Conclusion**

Origin and Authority of NCC

♦ The regulatory framework

- The authorities governing **telecommunications** was from different departments.
 - ✓ *lead to inconsistencies and inefficiency of regulators before Feb. 22, 2006*
- **Telecommunications Regulator:**
The Directorate General of Telecommunications (DGT) of The Ministry of Transportation and Communications (MOTC)
(The Telecommunications Act, Regulation of Universal Services)
- On February 22 2006, the National Communications Commission (NCC) became operational.

Establishment of Universal Telecommunications Services

- ♦ **The policy of telecommunications liberalization was implemented in 1996, and private operation of telecommunications was deregulated by the government. In a freely competitive environment, operators are cost conscious and profit-oriented and do not wish to sustain losses by providing telecommunications services in remote areas.**
- ♦ **To promote the basic communications rights of the citizens, to ensure fundamental telecommunications services enjoyed equitably by all citizens at reasonable prices, and to accommodate the government's policy of establishing an information society, National Communications Commission (hereinafter, the "NCC") seeks to create universal telecommunications services in accordance with relevant provisions of the Telecommunications Act**

壹、電信普及服務立法緣由

- ◆ 電信自由化政策台灣在 1996 年實施電信自由化政策，政府開放民間經營電信服務，在自由競爭環境中，業者考量成本與利潤，自不願在造成虧損之偏遠地區提供電信服務。
- ◆ 為增進國民基本通信權益，使全體國民得按合理價格公平享有一定品質之必要電信服務，並配合推動國家資訊化社會政策之需要，電信主管機關爰依電信法相關規定，建立電信普及服務制度（universal telecommunications services）。

Highlights of Telecommunications Universal Services Fund (1/2)

- ♦ ***NCC set up the Telecommunications Universal Services Fund in August 2001 and the Management Committee of the Telecommunications Universal Services Fund in October of the same year. Consisting of scholars, experts and government representatives, the Management Committee implements matters relating to universal telecommunications services through a collegiate system.***

貳、電信普及服務推動方式（1/2）

- ◆ 本會（前交通部電信總局）於2001年8月設立電信事業普及服務基金（The telecommunications universal services fund），並於同年10月成立電信事業普及服務基金管理委員會，由學者、專家及政府代表組成，以合議制之方式推動電信普及服務事宜。

Highlights of Telecommunications Universal Services Fund (2/2)

- ◆ ***The Management Committee functions to review and assess amounts of losses sustained by universal telecommunications service providers for providing universal telecommunications services.***
- ◆ ***Telecommunications authorities will require all telecommunications operators (such as Chunghwa Telecom, FarEasTone, Taiwan Mobile, etc.) to share the losses on a pro rata basis based on the annual business volume of each operator by compensating universal telecommunications providers for their losses.***

貳、電信普及服務推動方式（2/2）

- ◆ 管理委員會的功能在於審議並核定電信普及服務提供者提供電信普及服務所生之虧損金額。
- ◆ 電信主管機關爰依委員會審核普及服務執行之結果，依規定命各電信業者（如中華電信、遠傳電信、台灣大哥大．．．等電信普及服務分攤者）照各公司之年度營業額，按比例分攤，以挹注提供電信普及服務者之虧損。
- ◆ 實施範圍：不經濟地區市內電話、不經濟公立電話、中小學校及公用圖書館數據電路月租費補助
。

Data Communication Access Universal Service- Reasons for Regulation Amendments (1/2)

- ◆ ***The local line penetration rate has reached 97.56%, the penetration of voice communication service is almost 100%.***
- ◆ ***On data communication accessing service, due to its long distance to switching facilities, the users in remote areas are still unable to have broadband data service fairly.***
- ◆ ***Reference to the “Basic Telephone Service” in European Union’s Universal Service Directive in 2002 and has included data communication in the scope of universal service.***
- ◆ ***In order to shorten the digital differences between city and country sides, NCC, in its administrative plan for 2006, has set its administrative objectives as: “Protecting citizens and consumers interests” and “Increasing cultural diversity and respect the under-privileged.***

參、數據通信接取普及服務－修法緣由 (1/2)

- ◆ 我國市內電話普及率已達 97.56%，語音服務已趨近全面普及。
- ◆ 數據通信接取服務上，偏遠地區之用戶常因距離交換機房過遠而無法公平享有寬頻數據服務。
- ◆ 參考歐盟 2002 年普及服務指令之「基本電話服務」已將數據通信納入普及服務範圍。
- ◆ 為達成縮減城鄉數位落差政策，NCC 於 95 年度施政計畫已訂定施政目標「維護國民及消費者權益」、「提升多元文化尊重弱勢」。

Data Communication Access Universal Service- Reasons for Regulation Amendments (2/2)

- ◆ *Amend “Regulations on Telecommunication Universal Service” in December of 2006 and add that Type I telecommunication service providers could be assigned before June 1, 2007 to provide data communication universal service to some particular towns and villages according the demand of the non-economical areas. Data communication access service will be included in the application scope of universal services.*
- ◆ *Upgrade data communication access service to remote areas and the under-privileged as soon as possible and reach the policy objectives of “**Every village has broadband service, every household has telephone.**”*

參、數據通信接取普及服務－修法緣由 (2/2)

- ◆ 95 年 12 月修正「電信普及服務管理辦法」，增訂 96 年度得依不經濟地區之需求，於本(96) 年 6 月 1 日前指定第一類電信事業於特定村里提供數據通信接取普及服務。並將數據通信服務納入普及服務實施範圍。
- ◆ 為儘速提升偏遠地區與弱勢族群的數據通訊接取服務，以達「村村有寬頻、戶戶有電話、部落有公用電話」之政策目標。

Data Communication Access Universal Service – Promotion Method

- ◆ **Through the onsite investigation by public welfare groups, service providers and this Commission to find out the countryside residents' requirement to broadband network, the agricultural products of the villages, sightseeing resource and cultural characteristics to be the basis for assigning providers to offer data communication access universal service in those areas in 2007.**
- ◆ **The Commission has announced in May of 2007 to appoint Chungwha Telecomm and Taiwan Fixed Network to offer data communication access universal service to 46 villages in 2007. After the installation, the broadband service speed could be increase to above 2Mbps.**
- ◆ **It is estimated that the broadband network construction will be completed by the end of 2007 one after the other and achieve the policy target of shortening digital differences and “every village has broadband service”**

參、數據通信接取普及服務－推動方式

- ◆ 透過公益團體、業者及本會實地訪查寬頻未達村里之居民對寬頻網路需求、當地農特產、觀光資源及文化特色，作為指定業者於特定村里提供 96 年度數據通信接取普及服務之依據。
- ◆ 本會本（96）年 5 月公告指定中華電信股份有限公司及台灣固網股份有限公司於 46 個村提供 96 年度數據通信接取普及服務，建置完成後將可提升寬頻上網速率至 2Mbps 以上。
- ◆ 預計於 96 年底陸續完成寬頻網路建置，達成本會縮減數位落差「村村有寬頻」之政策目標。

Data Communication Access Universal Service – Solution Schemes and Structure Map

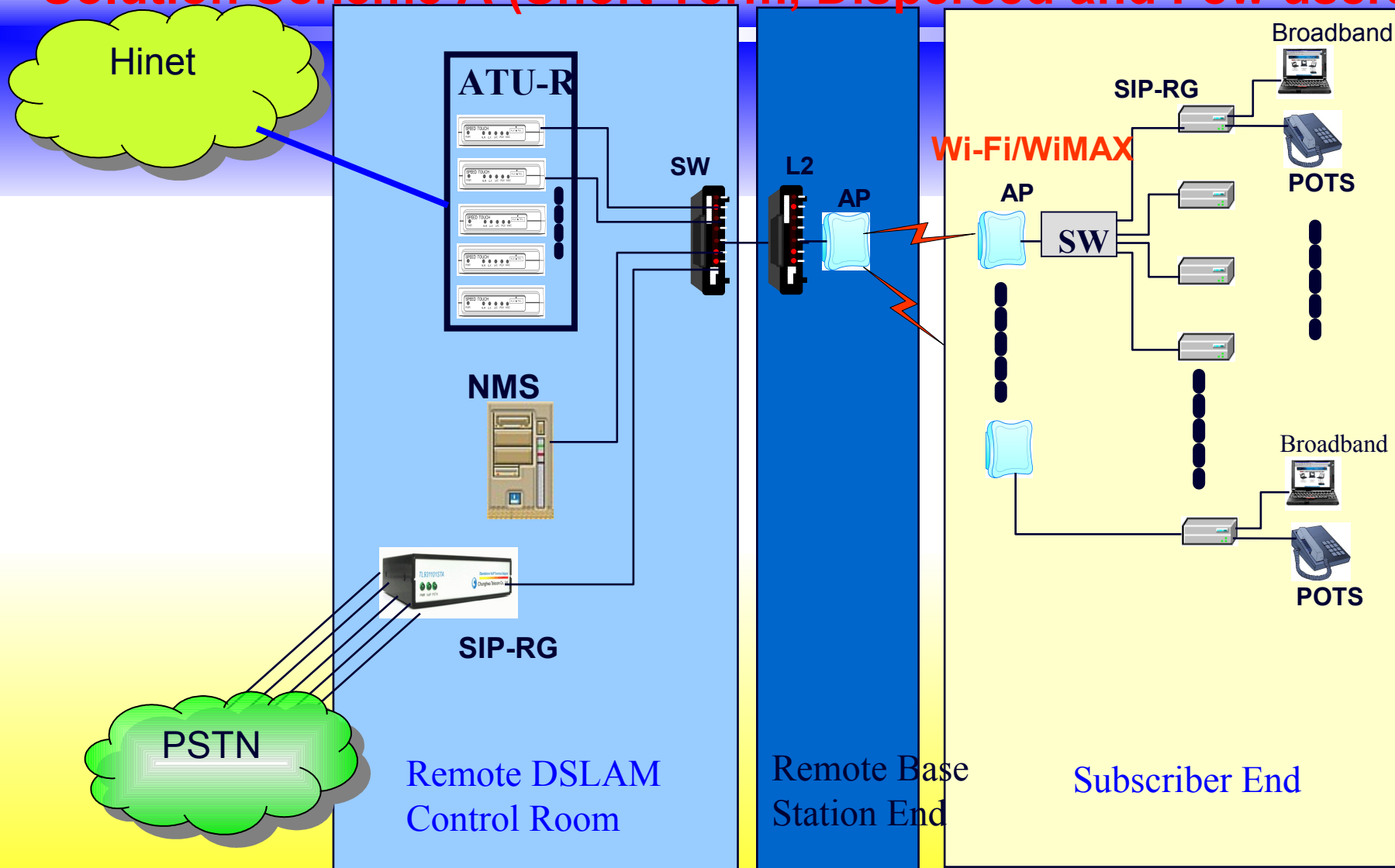
Solution Schemes	Description of local lines and broadband Internet service	Applicable Environment
A	1.Broadband Internet Service: ADSL infrastructure 2.Local Line Service: Using VoIP gateway equipment as interface for communication between users and PSTN	Dispersed and few users
B	1.Broadband Internet Service: FTTB infrastructure 2.Local Line Service: Using VoIP gateway equipment as interface for communication between users and PSTN.	Dispersed and few users
C	1.Broadband Internet Service: ADSL infrastructure 2.Local Line Service: Using IP PBX to be in charge of the Routing of VoIP and Control of PRI gateway between users and PSTN	Concentrated and many users
D	1.Broadband Internet Service: FTTB infrastructure 2.Local Line Service: Using IP PBX to be in charge of the Routing of VoIP and Control of PRI gateway between users and PSTN	Concentrated and many user
E	1.Broadband Internet Service: ADSL infrastructure 2.Local Line Service: E1-DLC	Concentrated and many users
F	1. Local Line Service and Broadband Internet Service are switch to NGN-CN commercial System	The long term Solution scheme for remote areas.

參、數據通信接取普及服務 - 解決方案及架構圖

解決方案	市話及寬頻上網服務說明	適用環境
A	<ol style="list-style-type: none"> 1. 寬頻上網服務：ADSL 架構 2. 市話服務：用戶與 PSTN 間的話務以 VoIP 閘道器設備界接 	用戶數少且住戶分散時
B	<ol style="list-style-type: none"> 1. 寬頻上網服務：FTTB 架構 2. 市話服務：用戶與 PSTN 間的話務以 VoIP 閘道器設備界接 	用戶數少且住戶分散時
C	<ol style="list-style-type: none"> 1. 寬頻上網服務：ADSL 架構 2. 市話服務：用戶與 PSTN 間的話務以 IP PBX 負責 VoIP 的 Routing 及控制 PRI 閘道器 	用戶數較多且住戶集中時
D	<ol style="list-style-type: none"> 1. 寬頻上網服務：FTTB 架構 2. 市話服務：用戶與 PSTN 間的話務以 IP PBX 負責 VoIP 的 Routing 及控制 PRI 閘道器 	用戶數較多且住戶集中時
E	<ol style="list-style-type: none"> 1. 寬頻上網服務：ADSL 架構 2. 市話服務：E1-DLC 	用戶數較多且住戶集中時
F	<ol style="list-style-type: none"> 1. 市話及寬頻上網改接至本公司 NGN-CN 商用系統 	長期偏遠地區的解決方案

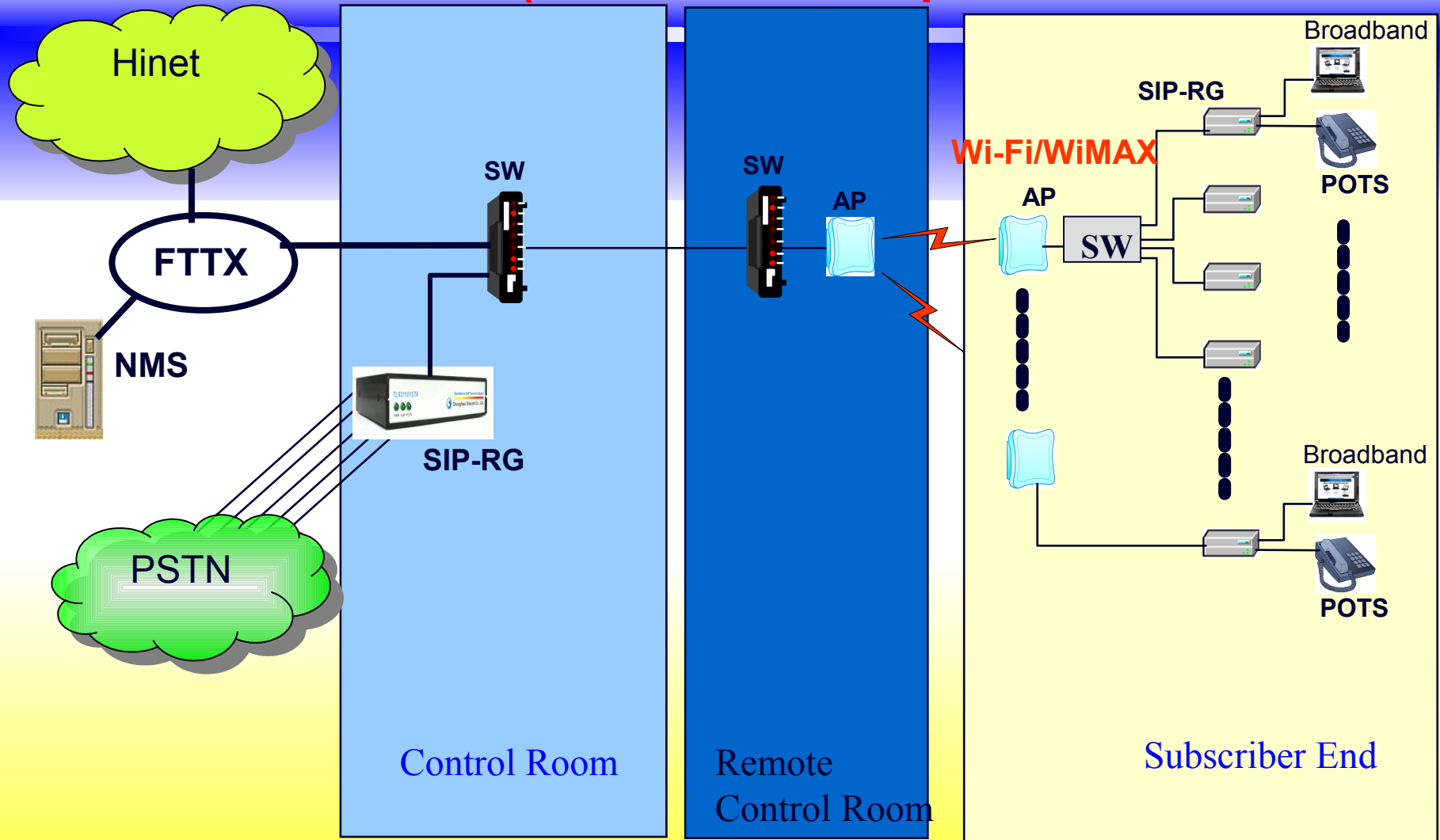
解決方案 A (短期當用戶少且分散時)

Solution Scheme A (Short Term, Dispersed and Few users)



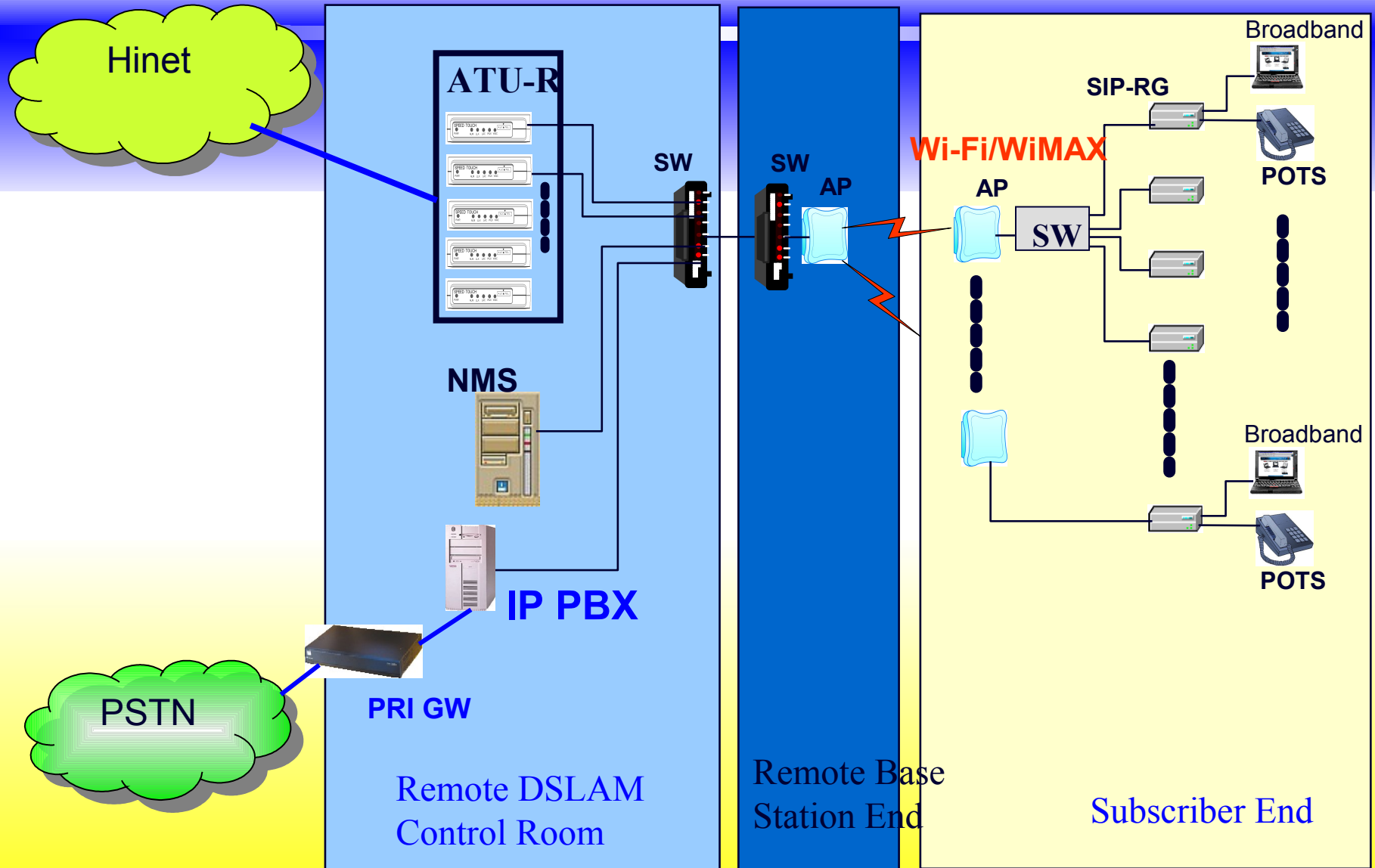
解決方案 B (短期當用戶少且分散時)

Solution Scheme B (Short Team, Dispersed and Few Users)



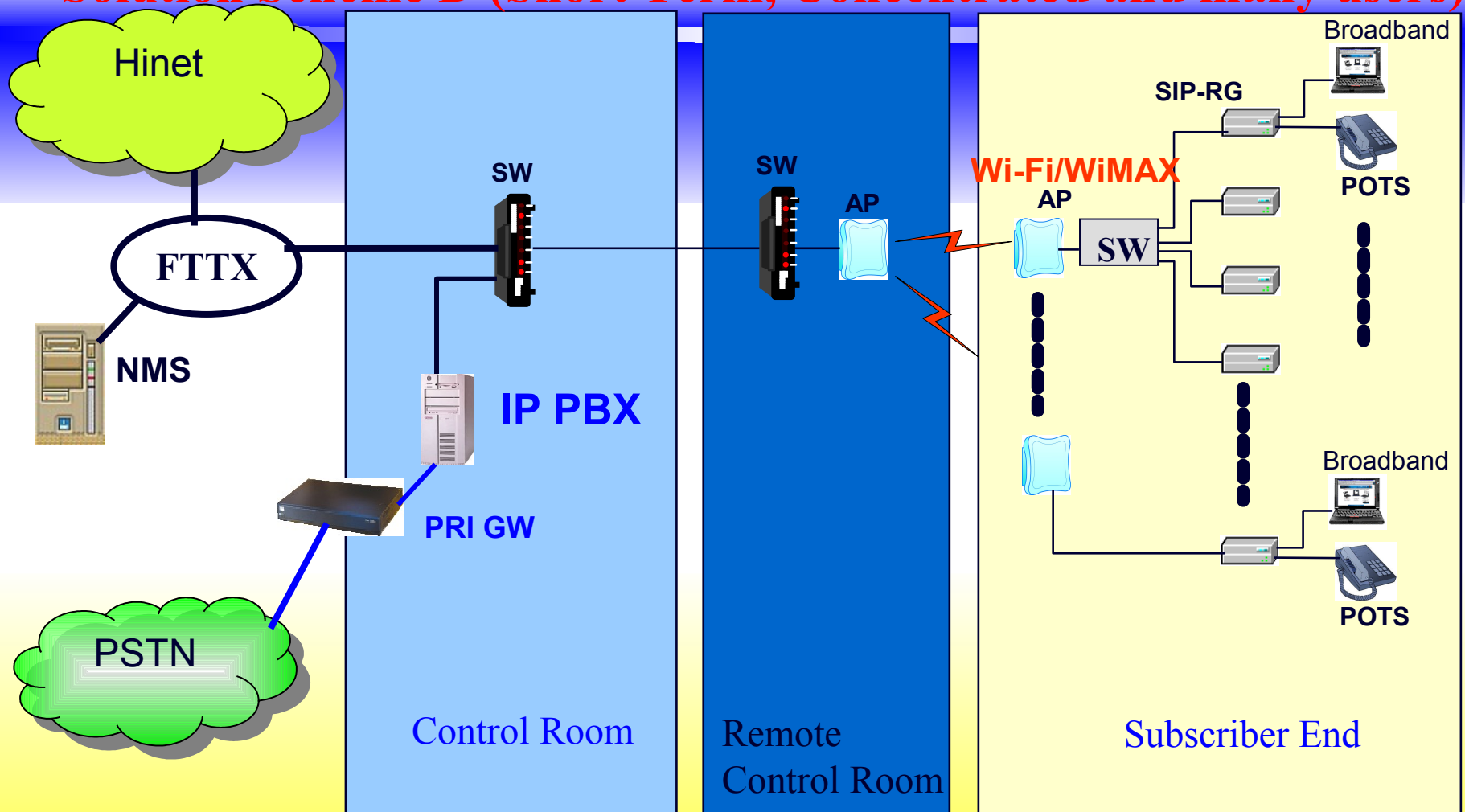
解決方案 C (短期當用戶數較多且集中時)

Solution Scheme C (Short Term, Concentrated and many users)



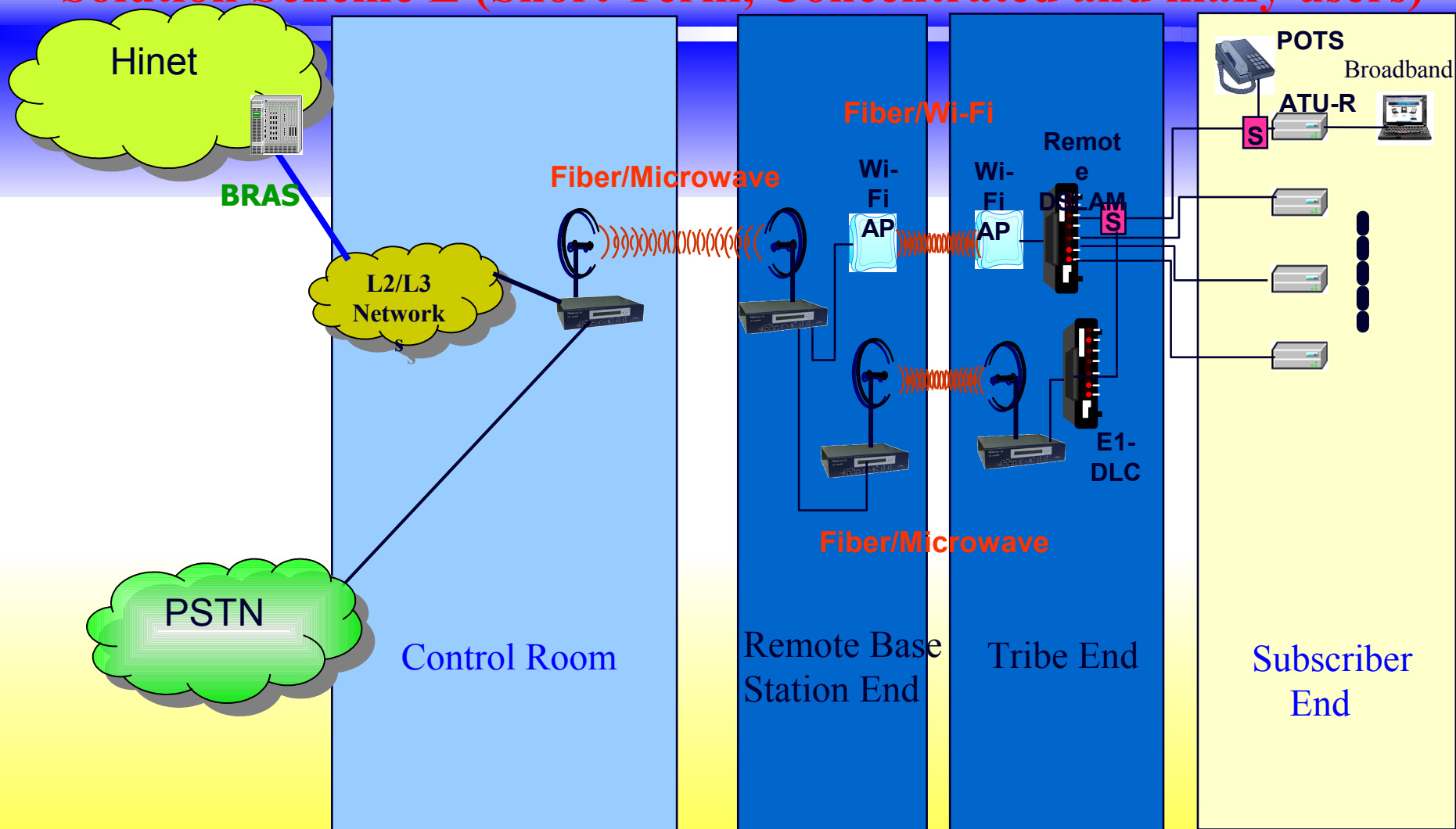
解決方案 D (短期當用戶數較多且集中時)

Solution Scheme D (Short Term, Concentrated and many users)



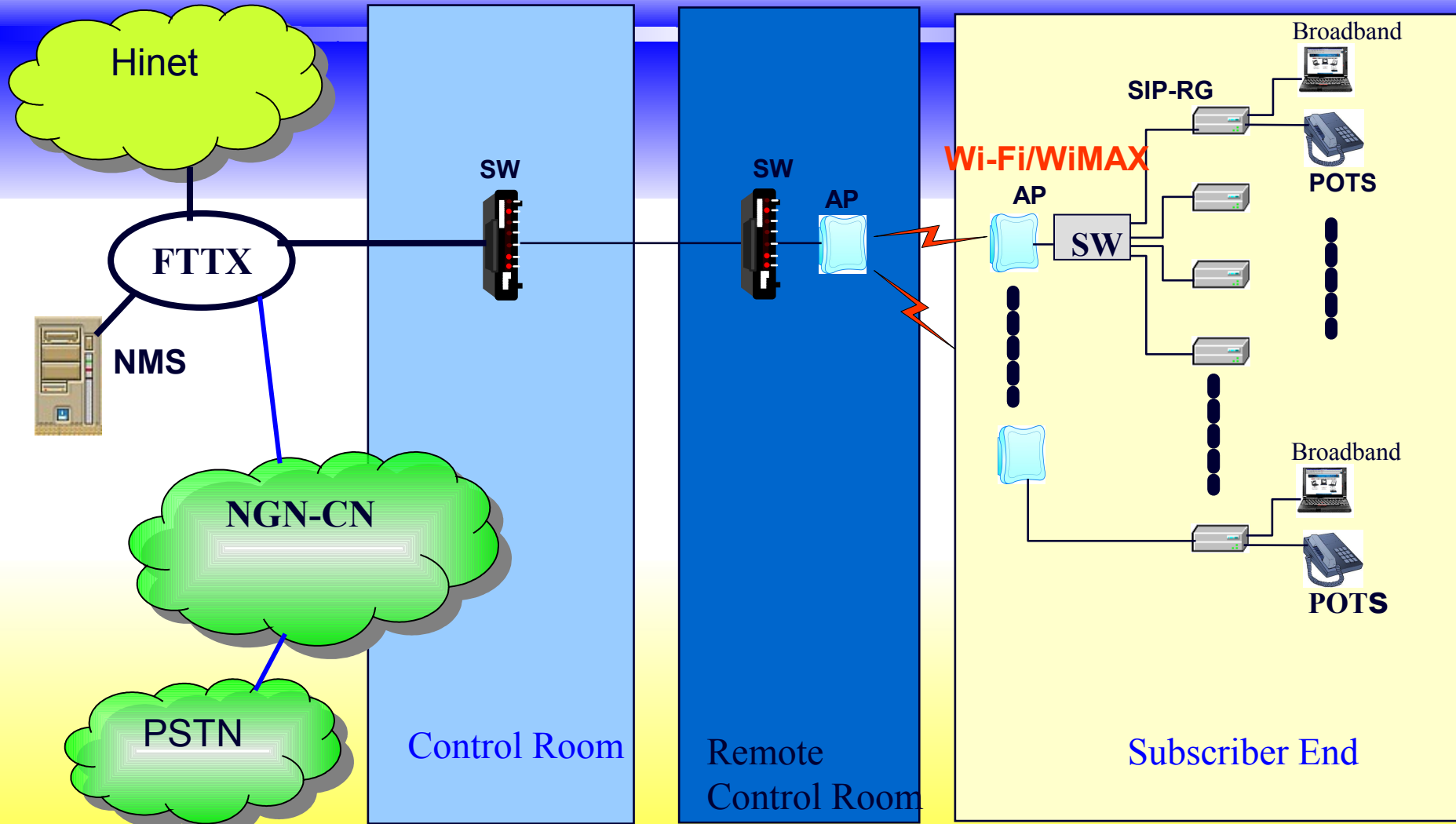
解決方案 E (短期當用戶數較多且集中時)

Solution Scheme E (Short Term, Concentrated and many users)



長期偏遠地區的解決方案 F

Long Term Solution Scheme F for Remote Areas



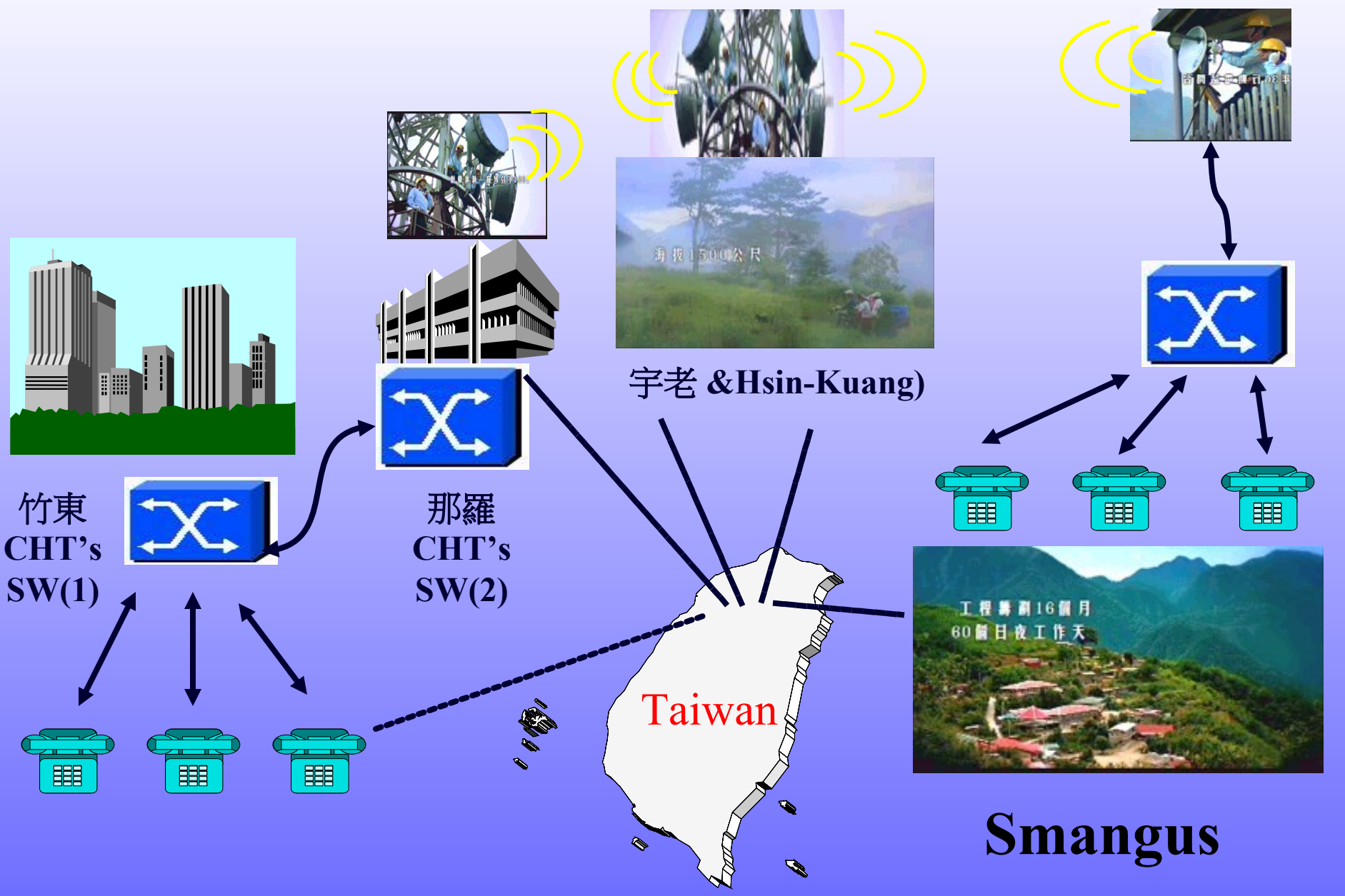
Concrete Achievements of Universal Services – Case Studies

- ◆ ***The Telecommunications Universal Services Fund not only assumes losses sustained by universal telecommunications service providers for providing voice communications to remote areas but also provides Internet access to remote mountainous areas to reduce digital divide. Concrete achievements exemplified by individual cases are summarized as follows:***
 - ***Case 1: God's Tribe – Atayal Tribe in Smangus***
 - ***Case 2: Homeland of Taiwan's Indigenous Butterfly Orchids – Shanchuku of Tawu Township***
 - ***Case 3: Blue Tribe – Alishan Township Lijia Village***

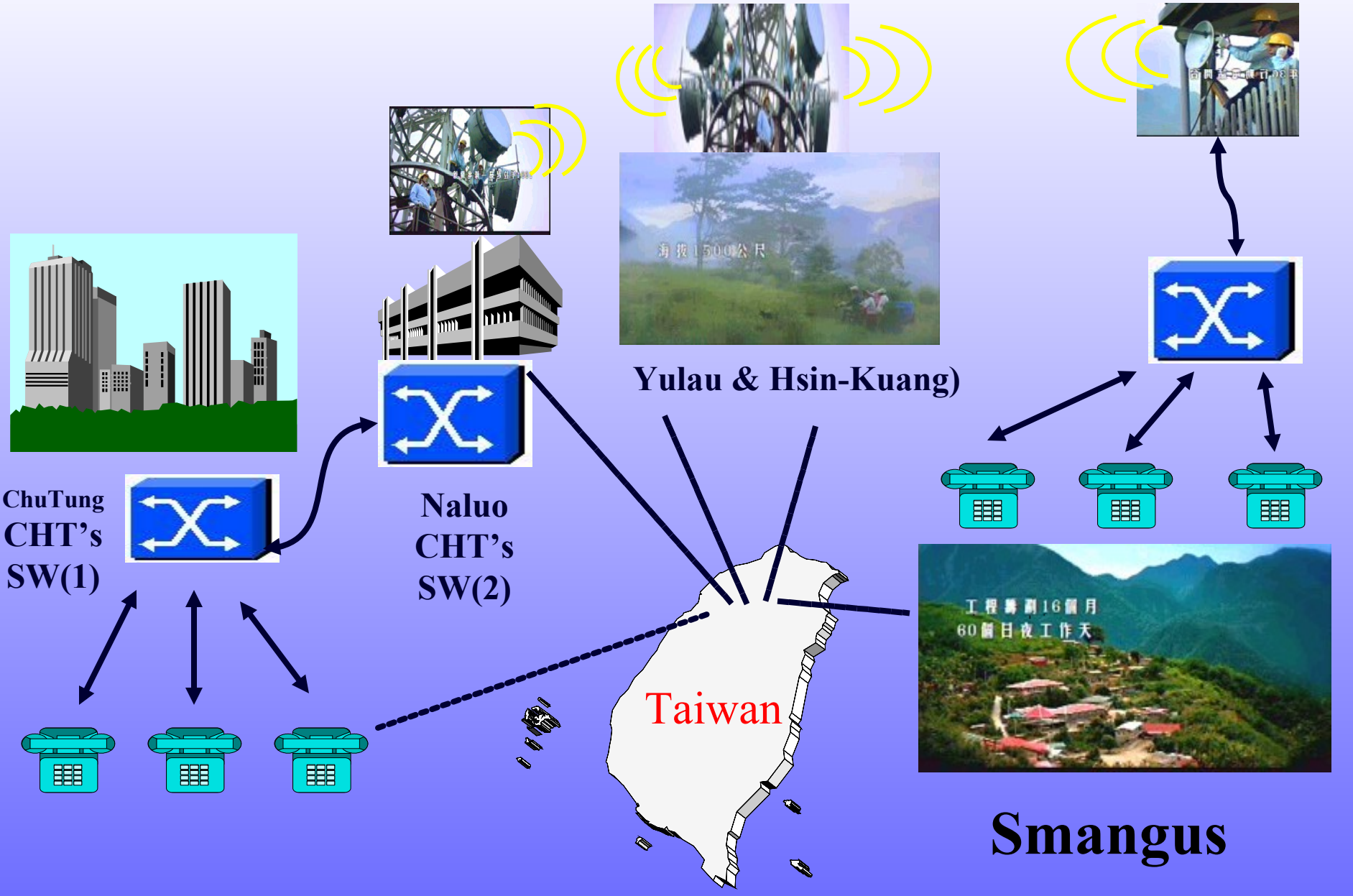
肆、實施語音及數據通信普及服務 個案具體績效

- ◆ 電信事業普及服務基金除挹注普及服務提供者經營偏遠地區語音通信所生之虧損外，另協助偏遠地區山地部落進行E化，減少數位落差，個案具體績效如次：
 - 個案 1：上帝的部落 --- 司馬庫斯泰雅族部落
 - 個案 2：台灣原生種蝴蝶蘭 -- 大武鄉山豬窟地區
 - 個案 3：藍色部落—阿里山鄉里佳村

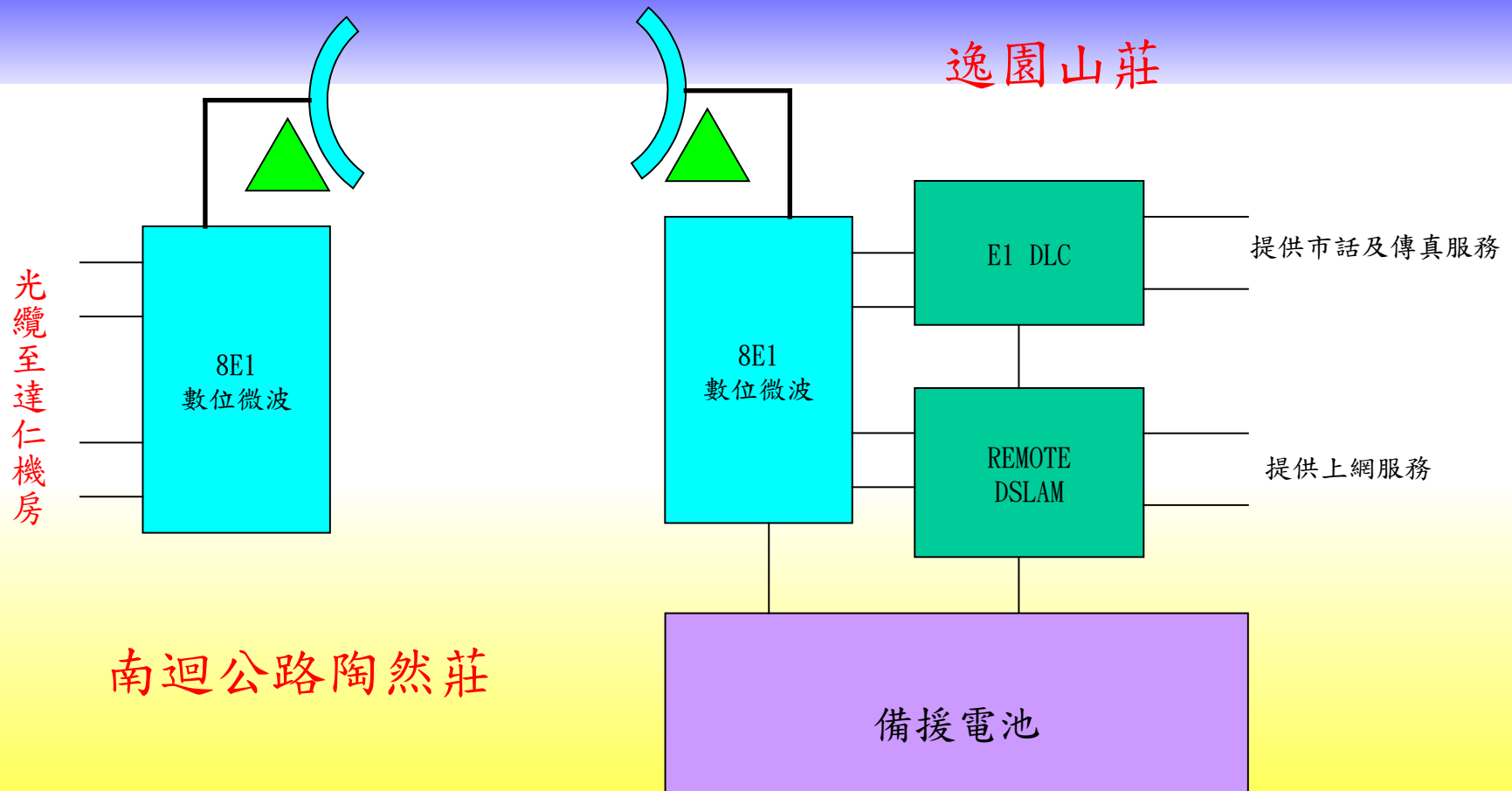
肆、個案 1：上帝的部落 --- 司馬庫斯泰雅族部落



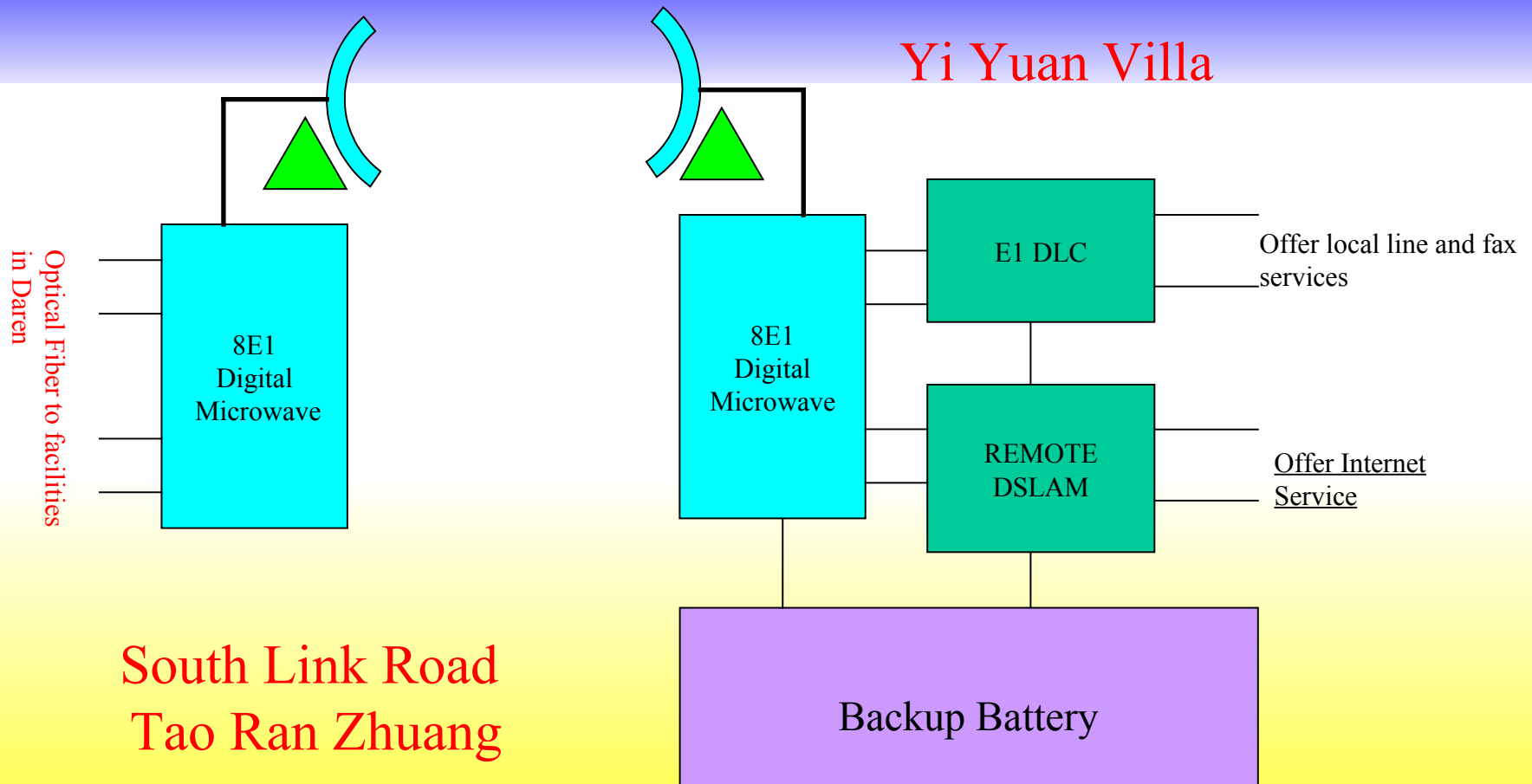
Case 1: God's Tribe--- Atayal Tribe in Smangus



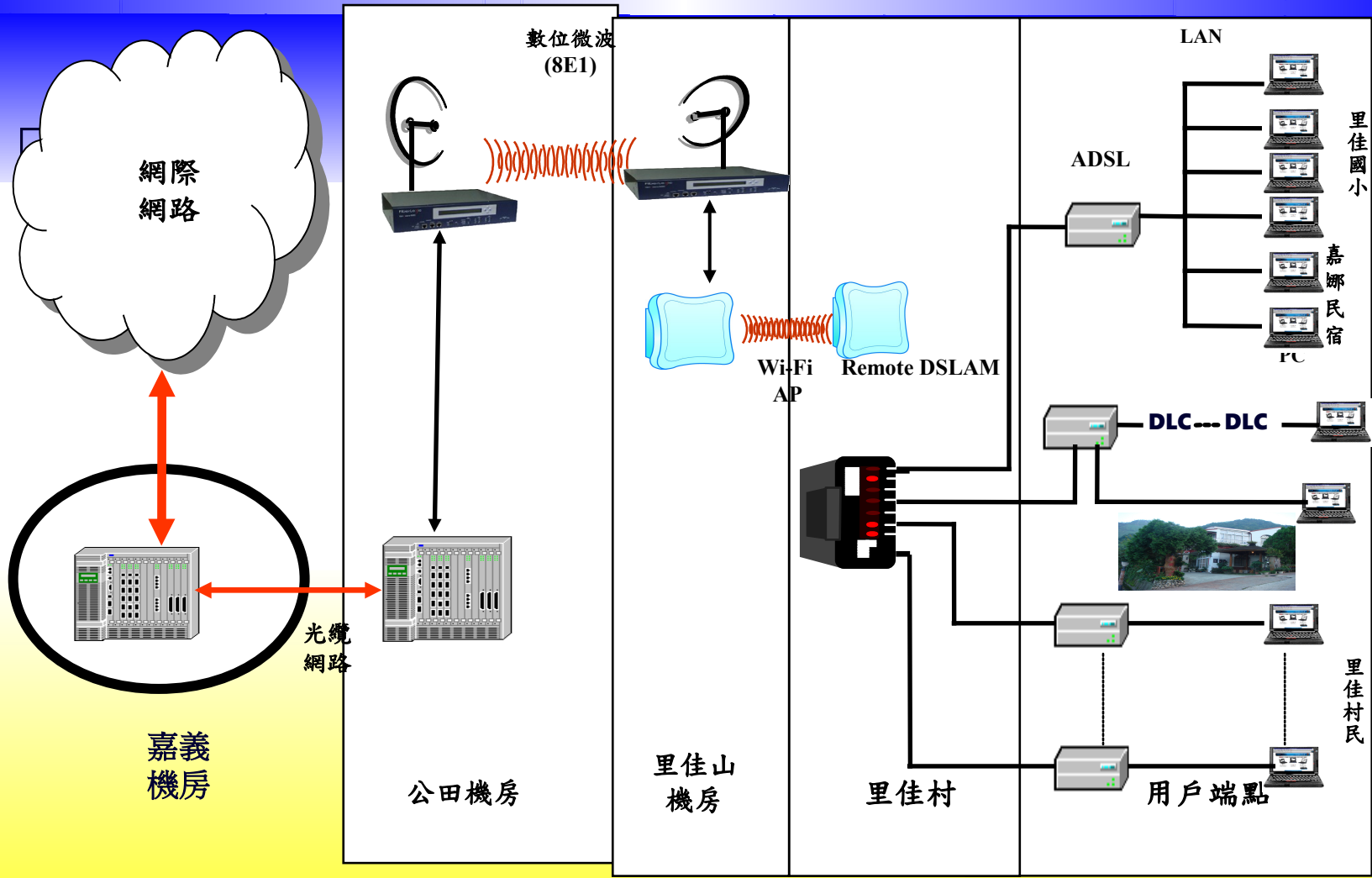
肆、個案 2：台灣原生種蝴蝶蘭 -- 大武鄉山豬窟地區



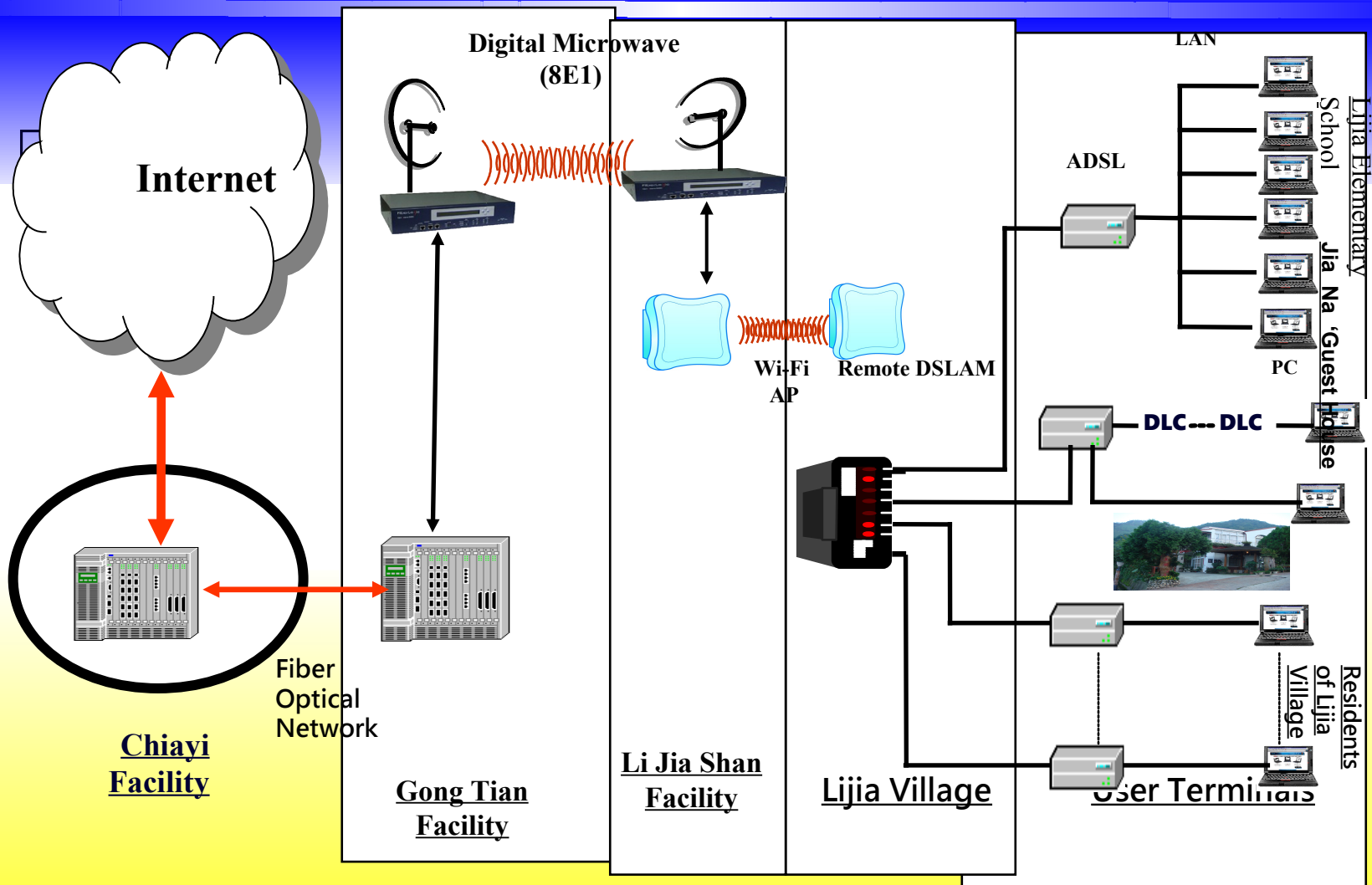
Case 2: Homeland of Taiwan's Indigenous Butterfly Orchids – Shanchuku of Tawu Township



肆、個案 3：藍色部落－阿里山鄉里佳村寬頻網路系統架構圖



Case 3: Blue Tribe — Alishan Township Lijia Village Broadband Network System Infrastructure Map



Implementation Results for 2007 (1/2)

The following benefits would be obtained after implementing the project of installing broadband access networks in 46 remote towns and villages in 2007:

- ◆ Reduce the differences in information education provided to remote areas .
- ◆ Develop Eco tour opportunity, promote agricultural development, increase job opportunity and encourage young villagers to go back to villages and serve.
- ◆ Utilizing Internet promotion to introduce the culture, language, food, cultural landscape, hand-made products, sightseeing resources, guest houses and agricultural products of the tribe and hence develop tribal economy and connect with the world.

伍、實施成果 (1/2)

96 年度推動偏遠地區 46 個村里寬頻接取網路建置後，可獲下列效益：

- ◆ 縮減偏遠地區資訊教育的落差。
- ◆ 發展生態旅遊及促進農業發展，增加就業機會，促進年輕村民回鄉服務。
- ◆ 利用網路行銷，介紹部落的文化、語言、美食特色、人文景觀、手工藝品、觀光資源、民宿以及農產品等，發展部落經濟，與世界接軌。

伍、96 年度實施成果 (2/2)

- ◆ 四網合一 (Quadruple Play) 或多網合一 (Multiple Play) - 同時解決部落市話、公共電話、寬頻上網、MOD 服務以及大哥大通信服務。
- ◆ e-learning：推廣網路學習原住民語言及遠距教學。
- ◆ 與政府網站相聯結，增進部落行政效率。
- ◆ 偏鄉寬頻上網服務速率在 1 年內提高 12 倍。

Implementation Results for 2007 (2/2)

- ♦ **Quadruple Play or Multiple Play**-Satisfying the local line, public phone, broadband Internet access, MOD service and Mobile communication services needs of tribal habitats at the same time.
- ♦ **e-learning** : Promote Internet Learning of Aboriginal languages and Long distance education.
- ♦ Connect to government websites and enhance tribal administration efficiency.
- ♦ The **Broadband Internet Service speed** has been increased by **12 folds within 1 year**.

Compensating for the losses of USO providers

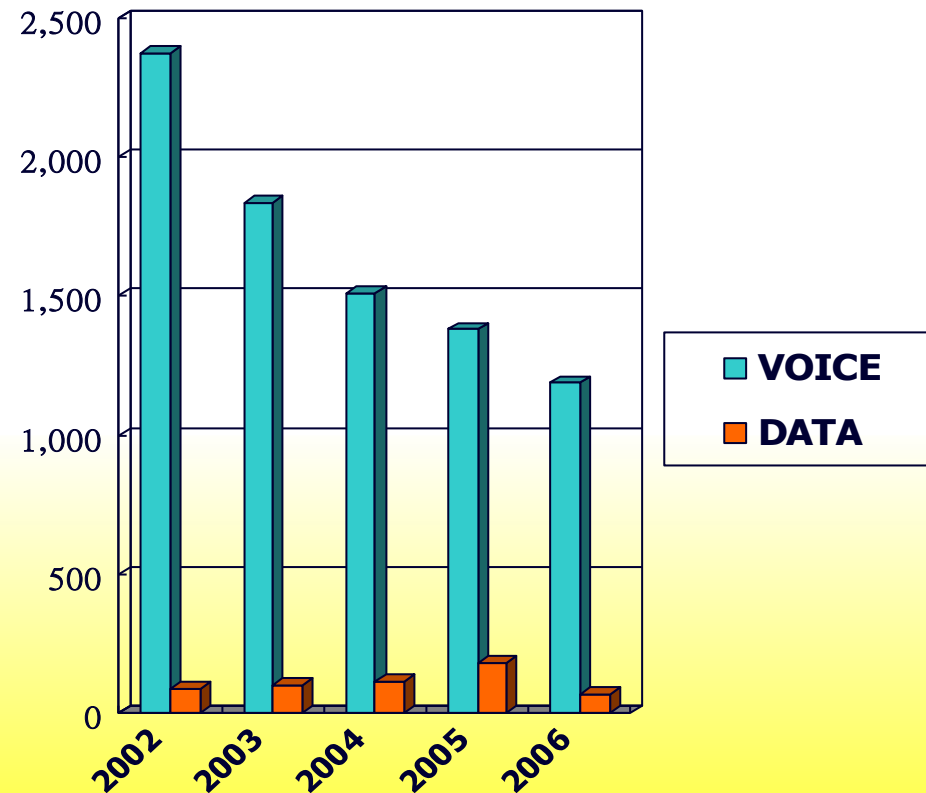
Annually compensation

➤ Voice USO

- 2002 : 2,374,873,951 NT\$
- 2003 : 1,837,512,690 NT\$
- 2004 : 1,508,703,523 NT\$
- 2005 : 1,380,045,170 NT\$
- 2006 : 1,187,303,674 NT

➤ Data USO

- 2002 : 86,694,329 NT\$
- 2003 : 100,190,008 NT\$
- 2004 : 114,255,400 NT\$
- 2005 : 181,331,704 NT\$
- 2006 : 65,512,337 NT\$



陸、各年度普及服務基金補助金額

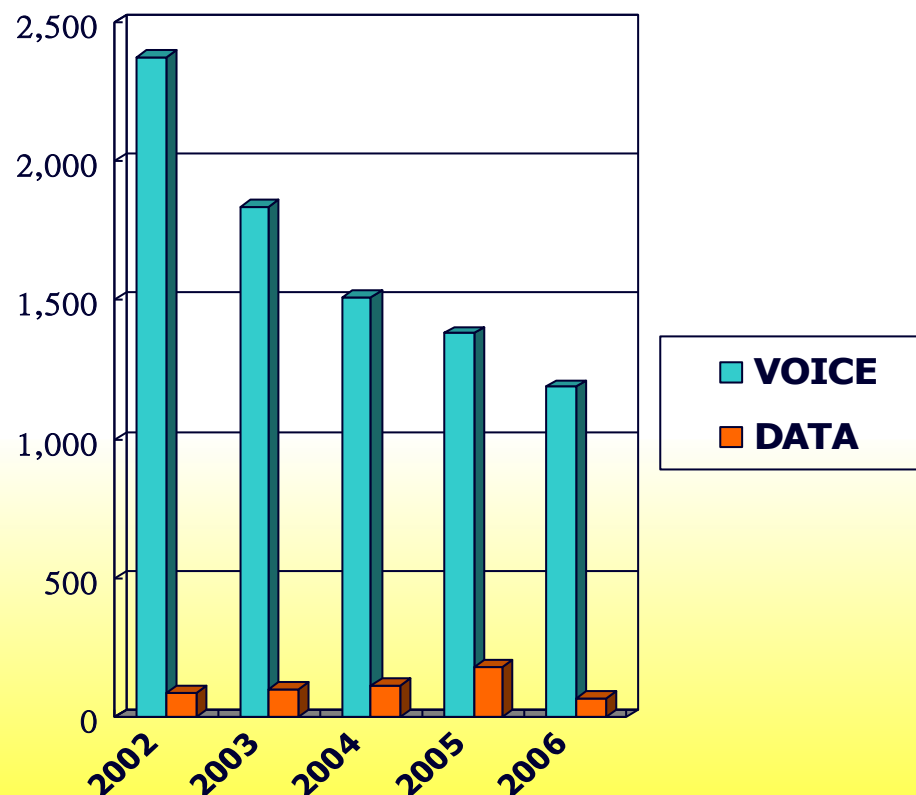
每年補助金額

➤ 語音部份

- 2002 : 2,374,873,951 NT\$
- 2003 : 1,837,512,690 NT\$
- 2004 : 1,508,703,523 NT\$
- 2005 : 1,380,045,170 NT\$
- 2006 : 1,187,303,674 NT\$

➤ 數據部份

- 2002 : 86,694,329 NT\$
- 2003 : 100,190,008 NT\$
- 2004 : 114,255,400 NT\$
- 2005 : 181,331,704 NT\$
- 2006 : 65,512,337 NT\$



Conclusions

- ◆ In the five years after Taiwan has implemented Telecommunication Universal Service, under the joint efforts from the government and telecommunication industry has shown the performance in reducing the digital differences in information communication service provided to under privileged people.
- ◆ From the success experience in developing Smangus Eco Tour and Agricultural product internet promotion in 2003 to the provision of broadband internet service to **46 towns and villages in the end of 2007**, the completion of this impossible mission has **made Taiwan the first country to complete the objective of “Every town has broadband internet service”**.
- ◆ Next yet, the Commission is going to push for **“Broadband service to tribal habitats”** policy and make aboriginal tribes to have the same kind of broadband data communication service quality with metropolitan areas.

柒、結語

- ◆ 台灣實施電信普及服務機制 5 年來，在政府與電信業界的共同努力下，顯現縮減弱勢族群之資訊通訊數位落差之實質績效。
- ◆ 從 92 年建設司馬庫斯寬頻上網發展生態旅遊及農特產品網路行銷的成功經驗，推展至今 (96) 年底完成 46 個特定村里寬頻上網建置，這個不可能任務的完成將使我國成為全世界第一個完成「村村有寬頻」的國家。
- ◆ 明年更預計推動「部落有寬頻」的政策，讓原住民部落享有與都會區相同的寬頻數據通信品質服務。

APPENDIX

Concrete Achievements of Universal Services – Case Study 1

- ◆ God' s Tribe – Ataya Tribe in Smangus
- ◆ Situated in northern Taiwan with an elevation of 1500 meters, Smangus is blessed with untainted and graceful natural landscapes. The pure-minded and nature-oriented indigenous people are diligent and religiously faithful. Collectively, they proudly refer to themselves as the God' s Tribe

附錄

實施語音及數據通信普及服具體績效－個案 1

一、上帝的部落 --- 司馬庫斯泰雅族部落

- ◆ 司馬庫斯部落（ smangus ）位於台灣北部海拔 1500 公尺的高山上，其自然景觀像一塊未經雕琢的璞玉，優雅秀麗。純樸自然的原住民，勤奮努力，信仰虔誠，自詡為「上帝的部落」。

Concrete Achievements of Universal Services - Case Study 1

- ◆ In 2000, the tribe began to communicate with the outside world via mobile phones. However, the high telephone charges were huge burdens on the residents, not to mention poor signal quality and unavailability of fax and Internet services.
- ◆ The NCC completed the deployment of local call networks in that area by December 2003 via the universal telecommunications services mechanism. Since then, the residents have enjoyed local call, fax and Internet services with the same quality and at the same prices enjoyed by general citizens.

實施語音及數據通信普及服務 具體績效－個案 1

- ◆ 2000 年該部落開始使用行動電話與外界通訊，高昂的電話費對於居民是很重的負擔，且收訊品質不穩，無法使用傳真及上網。
- ◆ 電信主管機關透過電信普及服務機制，於 2003 年 12 月底完成該地區之市話網路建設。自此居民享有與一般民眾同樣品質與價格的市內電話、傳真及上網服務。

Concrete Achievements of Universal Services -

Case Study 1

- ◆ Golden peaches, well-known local specialties, are now distributed via the Internet and are sold out very quickly. Broadband networks also contribute to Internet-based ecotours and the marketing of other farm produces.
- ◆ Universal telecommunications service providers deploy local call networks by way of both microwave and radio communications technologies in consideration of local topography. To protect local landscapes, cables at subscriber end were deployed underground, followed by radio and microwave transmissions. Relevant equipment includes spread spectrum microwave systems and MX3 multiplexing equipment and connects with fiber optic public communications networks via other switch rooms.

實施語音及數據通信普及服務

具體績效－個案 1

- ◆ 當地出產有名的黃金水蜜桃，現在透過網路行銷，很快就銷售一罄。透過寬頻網路，也促進當地E化生態旅遊及其他農產品行銷。
- ◆ 提供電信普及服務者考量當地地形，兼採微波及有線通信技術進行市話網路建設。為維護當地景觀，於用戶端佈纜地下化，再採用無線微波傳輸方式傳送。相關設備有展頻微波系統及MX3多工設備，經由其他機房，連接光纜公眾通信網路。

Concrete Achievements of Universal Services –

Case Study 2

- ◆ Homeland of Taiwan's Indigenous Butterfly Orchids – Shanchuku of Tawu Township
- ◆ Featuring magnificent landscapes with an elevation of about 500 meters, Shanchuku is located in a mountainous area in the southeast of Taiwan. Inhabited by the Paiwan Tribe, Shanchuku has witnessed an influx of plainsmen for agricultural development. Farm produces primarily include plums, olives, amur grapes, herbal plants, etc.

實施語音及數據通信普及服務 具體績效－個案 2

二、台灣原生種蝴蝶蘭 -- 大武鄉山豬窟地區

- ◆ 山豬窟地區位於台灣東南部山區，風景秀麗，海拔約 500 公尺，早期為排灣族聚居。近年來，逐漸有平地人移入發展農業，農產品以梅子、橄欖、山葡萄、藥用植物．．等為主。

Concrete Achievements of Universal Services - Case Study 2

- ◆ This area is the original habitat of Taiwan's indigenous butterfly orchids. However, indigenous butterfly orchids have almost gone extinct in Shanchuku, due to the prosperous development of artificially cultivated butterfly orchids. With a total of 58 households, Sanchuku is proactive in developing tourism and leisure agriculture with government assistance. There are also individuals interested in dedicating themselves to the restoration of Taiwan's indigenous butterfly orchids.

實施語音及數據通信普及服務 具體績效－個案 2

- ◆ 該地區為台灣原生種蝴蝶蘭發源地，惟近年來由於台灣人工培植蝴蝶蘭蓬勃發展的結果，原生種蝴蝶蘭在當地也幾近絕跡。目前有居民約 58 戶，在政府的協助下，積極規劃發展觀光休閒農業外，有心人士亦有意投入台灣原生種蝴蝶蘭的復育工作。

Concrete Achievements of Universal Services – Case Study 2

- ◆ Local residents seeking to apply for local numbers in early times had to give up due to their inability to pay NT\$200,000 to NT\$300,000 per household.
- ◆ With the assistance of the Telecommunications Universal Services Fund, network development for that area incorporates wired, wireless and microwave communications. As for communications within the tribe, the emphasis was on fixed line networks. Local call networks were completed in July 2005 and serve as the basis for developing Internet-based marketing of farm produces and ecotours.

實施語音及數據通信普及服務 具體績效－個案 2

- ◆ 早年當地居民曾提出申請市內電話，每戶約須支付新台幣 20~30 萬元不等，居民無法支付高昂的費用而作罷。
- ◆ 透過電信事業普及服務基金的協助，該地區聯外網路建設係結合有線、無線微波通信方式，至於部落內則以有線固網建設為主。於 2005 年 7 月完成當地市話網路建設，提供當地發展 E 化農產品行銷及生態旅遊之基礎。

Concrete Achievements of Universal Services – Case Study 3

Blue Tribe — Alishan Township Lijia Village

- ◆ Lijia Village has a dark blue sky, light blue mountains, with a non-damaged and non-polluted “Wujiha” river. It is a beautiful mountain village and is called the “Blue Tribe”. It is located at the most remote southern tip of Alishan Township. It is the oldest tribal habitat of Tsou Tribe and it is also the first station for people migrating to other places.
- ◆ The Village has about 80 households, 300 residents, 5 guest houses. Residents are living on the river hill stair on 1000 meters above sea level in groups. Most of the residents make living from growing agricultural products such as Oolong Tea, Jelly-fig, peaches, bamboo shoots and vegetables.

實施語音及數據通信普及服務 具體績效－個案3

三、藍色部落－阿里山鄉里佳村

- ◆ 里佳村有著深藍色的天空、淺藍色的青山，伴著一彎淡藍色、無破壞、無汙染之「烏奇哈溪」，是一個美麗的山居，被稱為【藍色部落】，其位於阿里山鄉南端最深遠的村落，是昔時鄒族最古老的部落及向外遷徙的第一站。
- ◆ 該村有居民約 80 戶、300 多人、5 家民宿，村民群居於海拔約 1000 公尺的河谷台階，多種植烏龍茶、愛玉子、水蜜桃、竹筍、蔬菜等農作物維生。

Concrete Achievements of Universal Services – Case Study 3

- ◆ The landscape characteristics of Lijia village is high mountains and fast running waters. It has many special landscape and rock caves such as Lovers cave, Bat cave, and Eyes for the Sky and Land. There are also several old mountain climbing roads; the rivers cut through the mountains and form waterfalls. “Wujiha” river is currently conducting river eco conservation for mountain *Scaphesthes barbatulus*. In the native forests, there are abundant bird resources for developing bird watching activities.

實施語音及數據通信普及服務 具體績效－個案3

- ◆ 里佳村地形特色山高水急，有著許多特殊地形與岩洞，如情人洞、蝙蝠洞、天地眼等岩洞景觀及多條登山古道；山岳與河川的切割形成瀑布景觀。烏奇哈溪目前實施台灣特有的高山鯢魚溪流生態保育，在原始林班地內更有豐富的鳥類資源得以發展賞鳥活動。

Concrete Achievements of Universal Services – Case Study 3

- ◆ The community development positioning of Blue Tribe has set its goal on cultural industry tribal habitat and it has turned its original agricultural production into eco tourism using life experience of Tsou tribe such as wild cooking, millet pounding, hand-made crafts, traditional songs and dances and Tsou tribal food and eco tourism as selling points to protect local resources and create continuous working opportunities.

實施語音及數據通信普及服務 具體績效－個案3

- ◆ 藍色部落的社區發展定位，主要是以文化產業部落為目標，將原有的農業生產轉型為生態旅遊，以鄒族生活體驗如野炊、椿小米、手工藝、傳統歌舞以及鄒族美食，為生態旅遊之訴求，並保護當地資源，創造持續性的就業機會。

Concrete Achievements of Universal Services – Case Study 3

- ◆ The construction of broadband network service to Lijia village is through appointing Chunghwa Telecom to be in charge of the execution by Universal Service Committee . Chunghwa Telecom overcomes various difficulties with landscapes and avoid the damage of typhoon, torrential rain and mudslides and use wireless network system to replace the existing fiber optical wired network system.
- ◆ Chunghwa Telecom has completed the 16E1digital microwave system from Gong Tian Facility to Lijia mountain facility, the construction of 2 way WiFi-AP broadband system from Lijia mountain facility to Lijia village, the connection between the new network system and the original local line network on June 30, 2007 as scheduled to offer broadband Internet services to Lijia elementary school, local guest houses and residents of Lijia village. The case is also the first one to use wireless broadband network system installation model in the 46 selected villages and towns for broadband universal service.

肆、實施語音及數據通信普及服 具體績效－個案3

- ◆ 里佳村之寬頻網路建置，係透過普及服務管理委員核定由中華電信股份有限公司負責執行，該公司為克服各種地形地物的困難及避免颱風季節豪雨、土石流的破壞，使用無線網路系統取代光纖有線網路系統。
- ◆ 中華電信公司已於 96 年 6 月 30 日如期完成公田機房對里佳山機房 16E1 的數位微波系統、里佳山機房對里佳村的 2 路 WiFi-AP 寬頻系統架設、以及將本新建網路系統與原當地的有線市話網路結合，提供里佳國小、當地民宿以及里佳村民寬頻上網的服務。本案也是 46 個特定村里中第一個使用無線寬頻網路系統的建置模式。

Thank you!