



Addition Revenue Streams for Service Providers Using GPON Solutions



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ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

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ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Lecture Outline :

1. Introduction to GPON FTTx Cabling
2. GPON FTTx Cabling Architecture
3. GPON Business Models
4. Sample Additional Revenue Streams Thru GPON FTTx
5. Sample Project/s



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

GPON OVERVIEW

PON/GPON grew from a requirement for more bandwidth in the Service Provider Market. (Higher access speeds than DSL could deliver) More Bandwidth (2.5G Downstream and 1.2G Upstream)

- Higher Subscriber density
 - Best replacement for aging copper / coax infrastructure
 - Environmentally friendly - green
 - Reduce power and TCO (Total Cost of Ownership)
-
- Long term life expectancy of the fiber infrastructure
 - Lower capital expenditures, since AN eqpt. and components are considerably reduced and/or completely excluded in the FTTx network
 - Lower operating costs through reduction of active components, support for greater distances between equipment nodes
 - Reduced re-occurring operating and maintenance costs



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

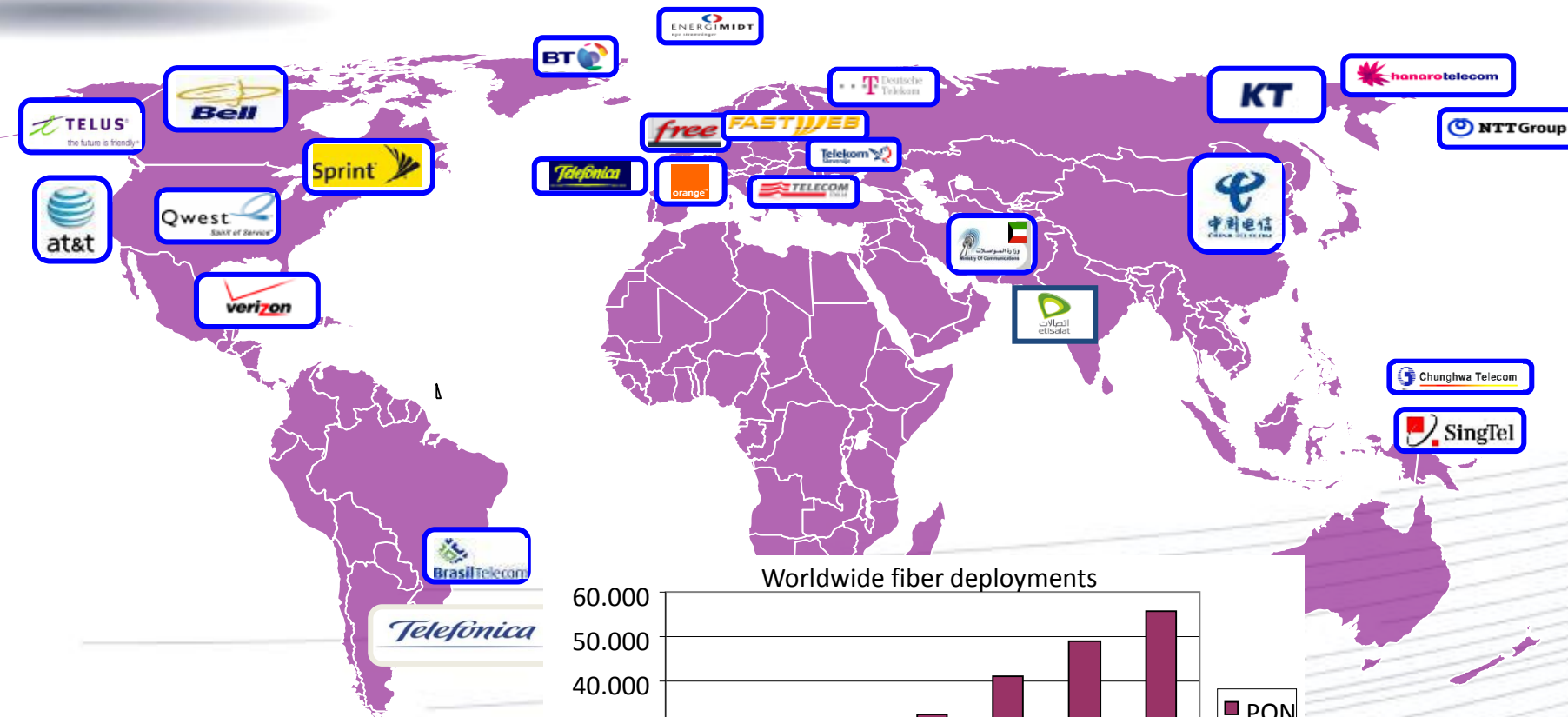
GPON OVERVIEW

- The adoption and worldwide acceptance grew as GPON FTTH proved that it has contributed much to the service providers in terms of time, money and human resources
- Contributes to the improved client service levels and over-all customer satisfaction; thus enhancing retention rates
- And most notably, GPON FTTH technology solutions; introduced new opportunities and services applications to service providers, introducing additional revenue streams which can be adopted and integrated into their present services offering; thereby increasing top line revenue without increasing cost

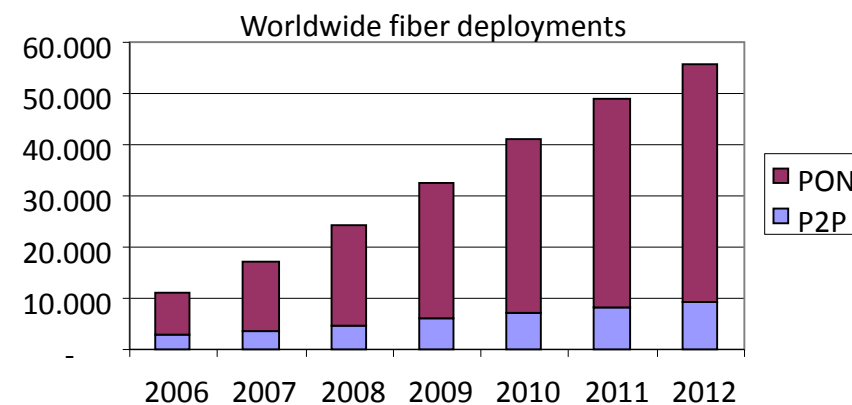


ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling



Government Adoption / Worldwide Acceptance



Source: Broadband trends, 10/2007

All over the world operators go for PON = PON subscribers will dominate PTP subscribers





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

Basic Parameters of GPON

- GPON identifies 7 transmission speed combination as follows:

0.15552 Gbit/s up, 1.24416 Gbit/s down

0.62208 Gbit/s up, 1.24416 Gbit/s down

1.24416 Gbit/s up, 1.24416 Gbit/s down

0.15552 Gbit/s up, 2.48832 Gbit/s down

0.62208 Gbit/s up, 2.48832 Gbit/s down

1.24416 Gbit/s up, 2.48832 Gbit/s down

2.48832 Gbit/s up, 2.48832 Gbit/s down

Among them, 1.24416 Gbit/s up, 2.48832 Gbit/s down is the mainstream speed combination supported at current time.

- Maximum logical reach: 60 km
- Maximum physical reach: 20 km
- Maximum differential fibre distance: 20 km
- Split ratio: 1 : 64, it can be up to 1 : 128

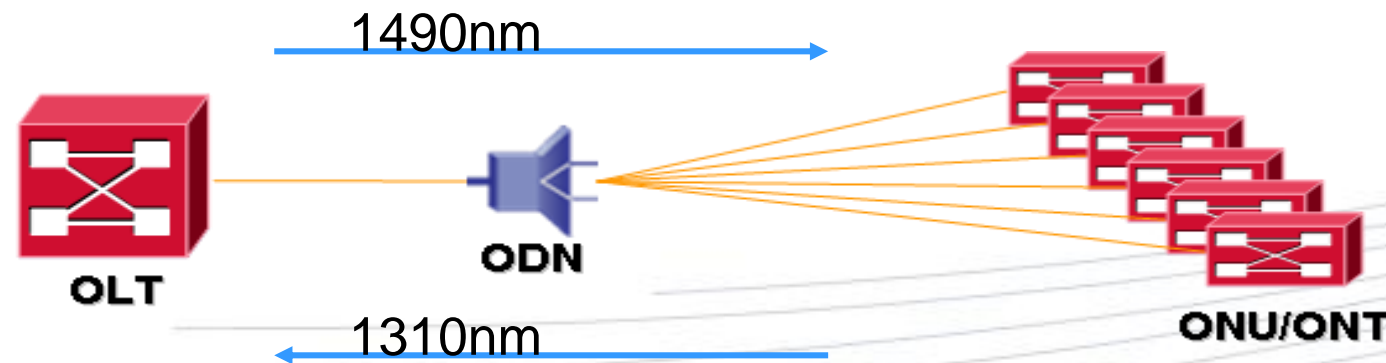


ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

GPON Principle---Data Multiplexing

GPON adopts Wavelength Division Multiplexing (WDM) technology, facilitating bi-direction communication over a single fiber.



To separate upstream/downstream signals of multiple users over a single fibre, GPON adopts two multiplexing mechanism:

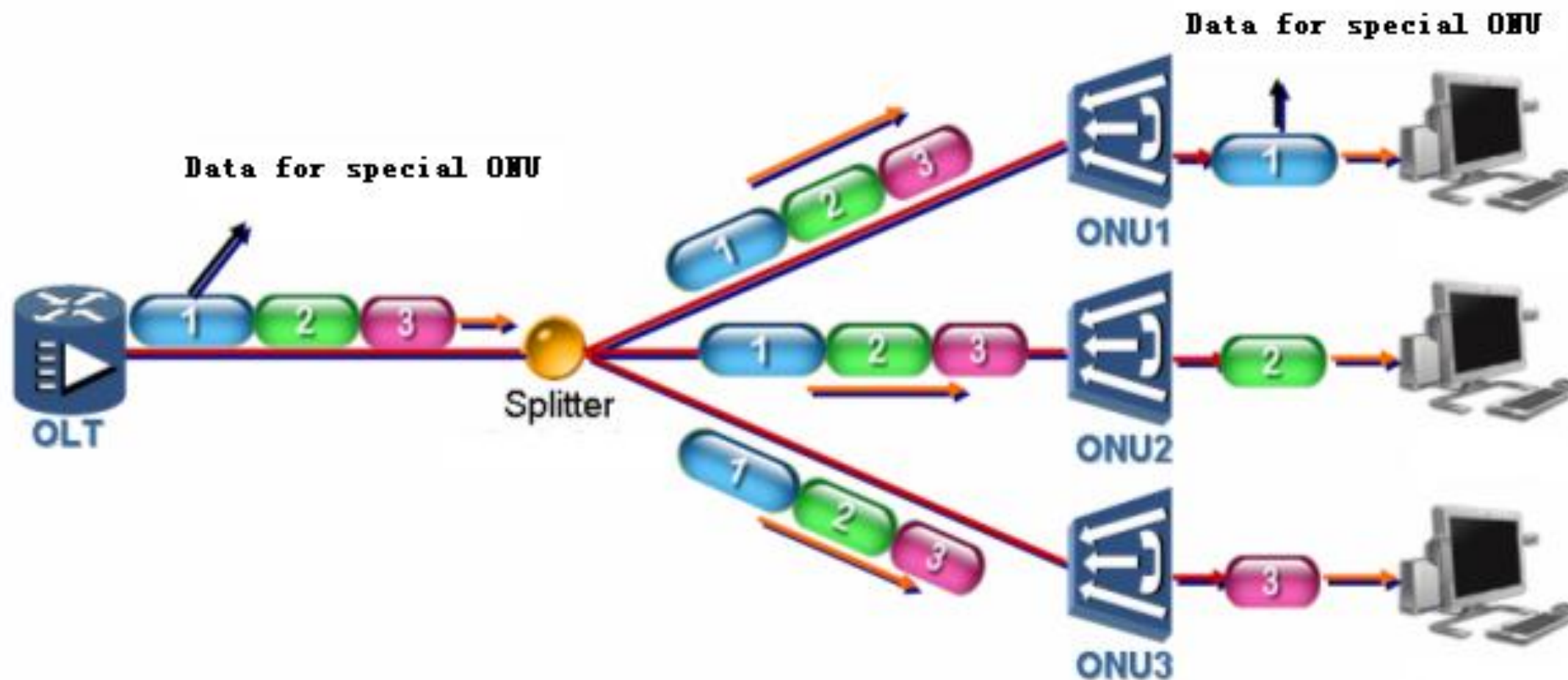
- In downstream direction, data packets are transmitted in a broadcast manner;
- In upstream direction, data packets are transmitted in a TDMA manner.



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

GPON Principle---Downstream Data

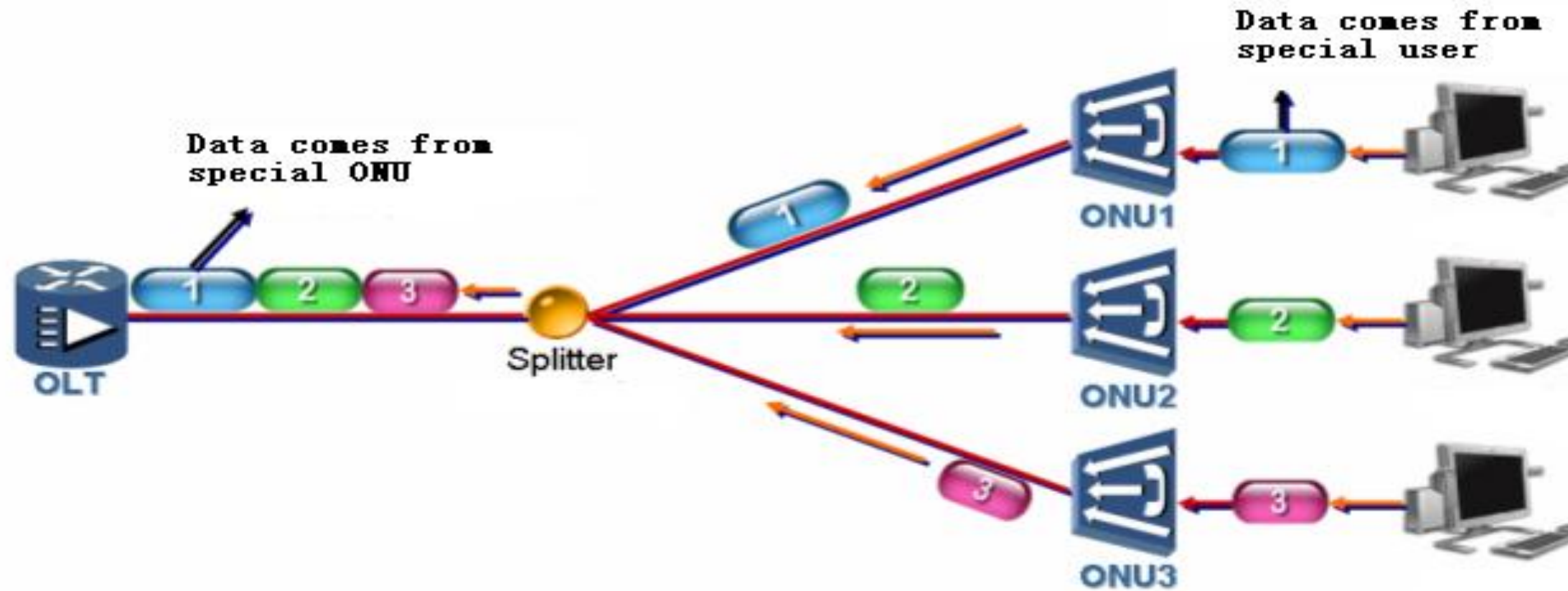




ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

GPON Principle---Upstream Data



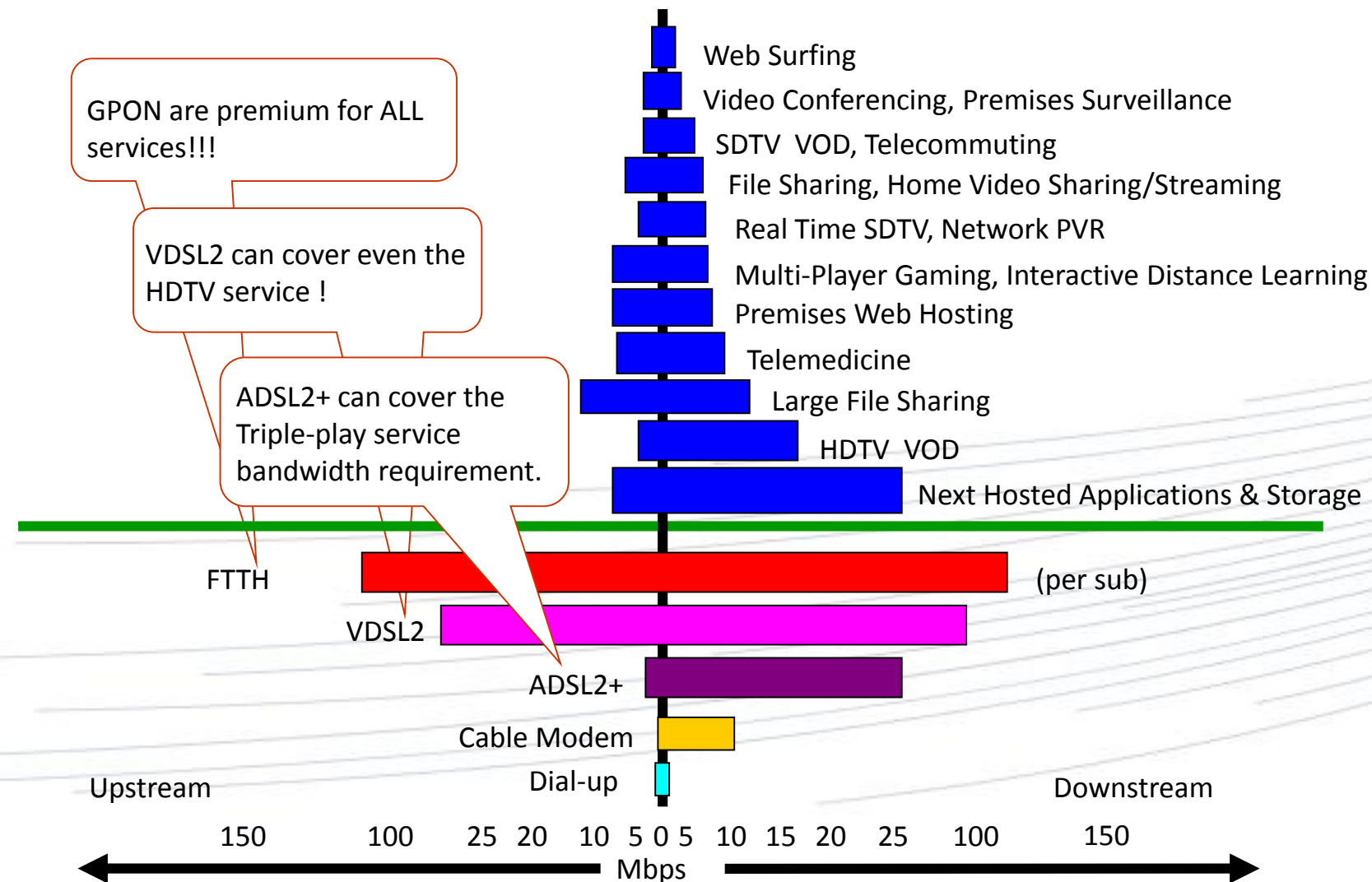
- TDMA mode



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

Consumer's Bandwidth Reqmts. Met By FTTH



GPON are premium for ALL services!!!

VDSL2 can cover even the HDTV service !

ADSL2+ can cover the Triple-play service bandwidth requirement.



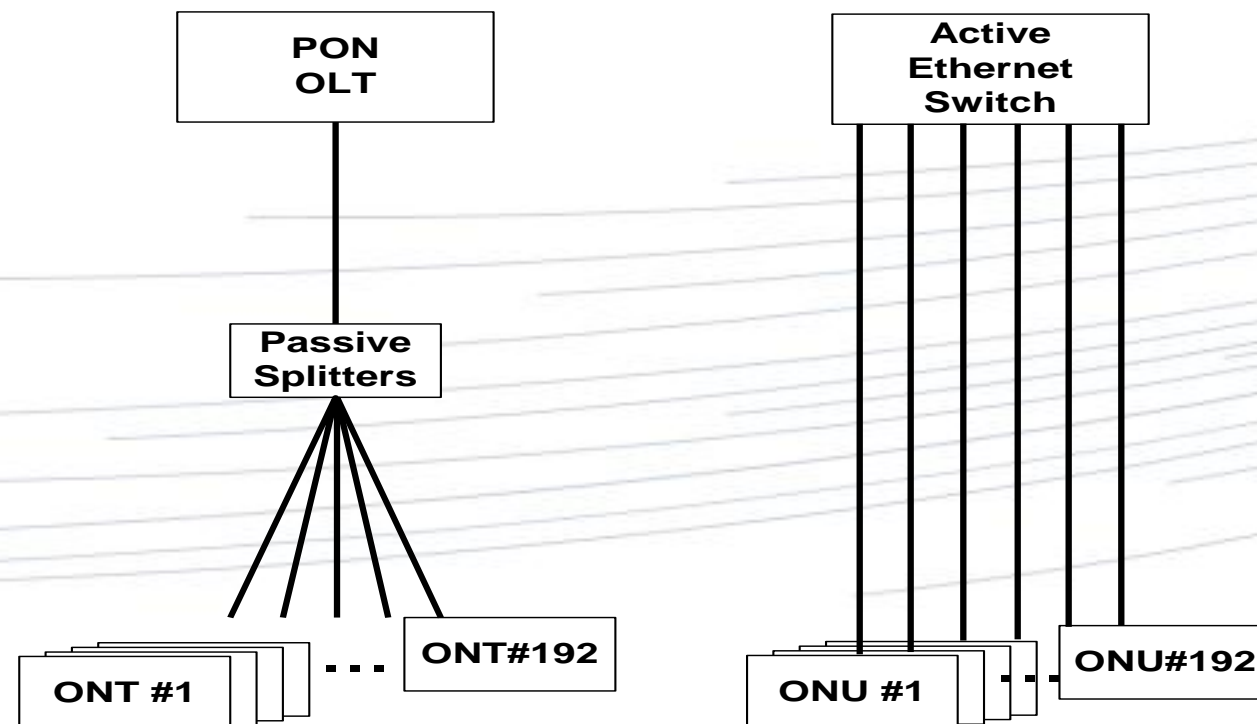


ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling

Ethernet Vs. PON FTTx

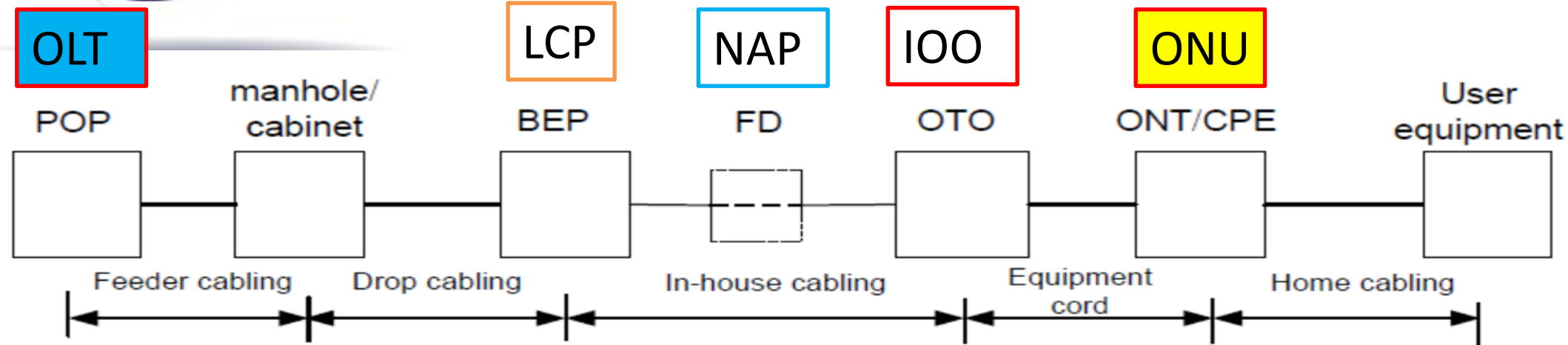
- There are 2 choices for Fiber Access:
 - **Point to Point**
 - **Point to Multi-point**
- Point to Point is sometimes called Active Ethernet
- Point to Multi-point is called PON (passive optical network)





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Introduction to GPON FTTx Cabling



Key

BEP	Building Entry Point
CPE	Customer Premises Equipment
FD	Floor Distributor
ONT	Optical Network Termination
OTO	Optical Telecommunications Outlet
POP	Point of Presence

LCP Local Convergence Point

NAP Network Access Point

IOO Indoor Optical Outlet



NAP 1:4

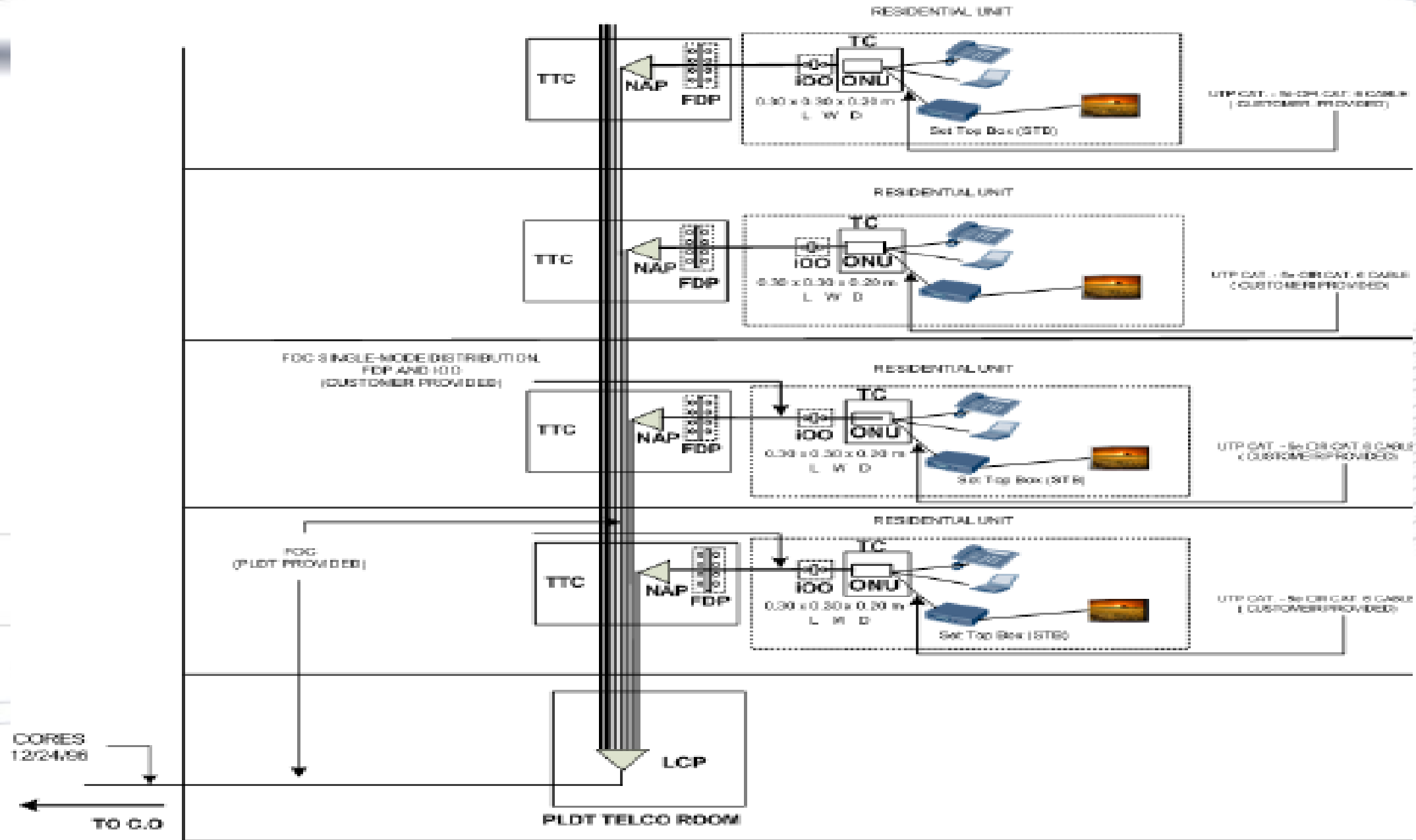
Figure 1 FTTH in-house installation reference model





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

FTTx Cabling Architecture

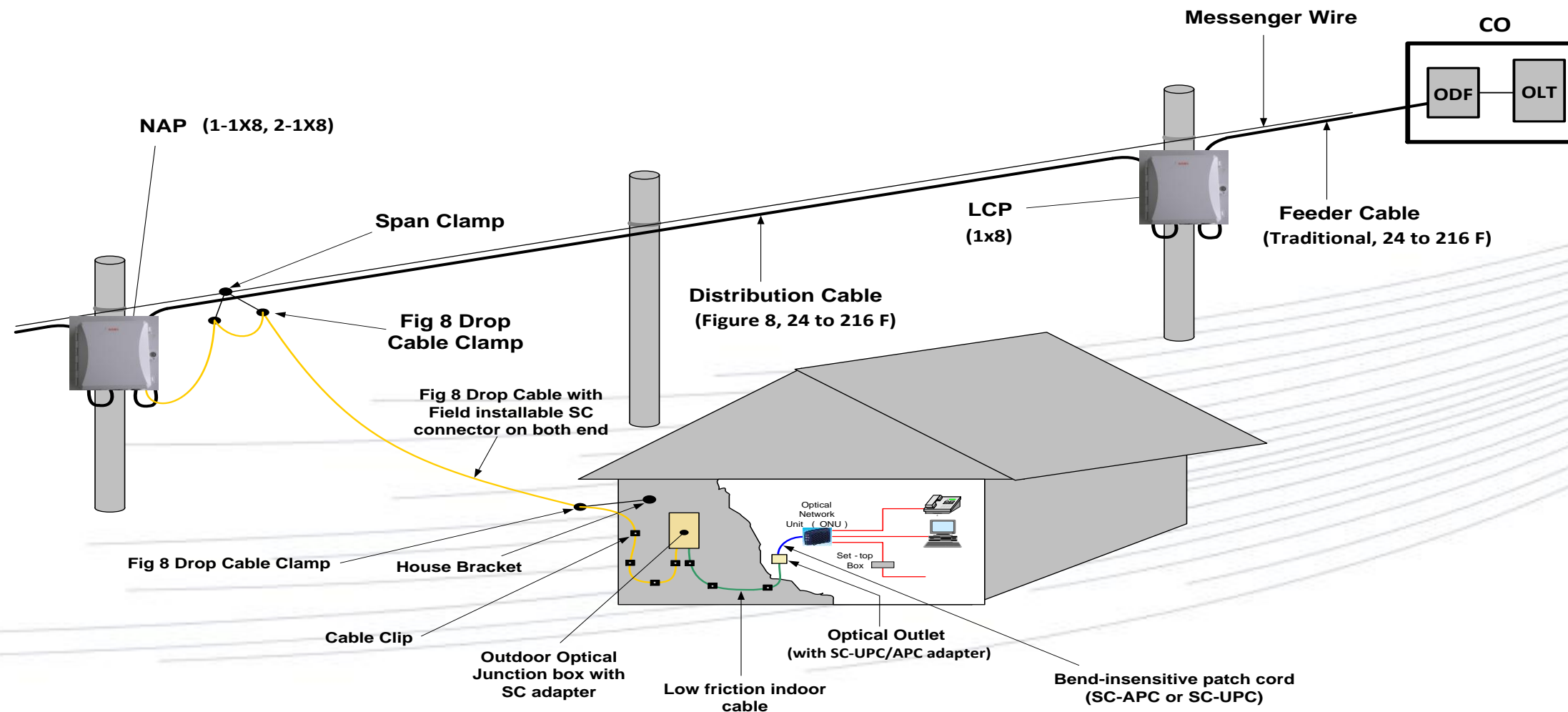




ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

FTTx Cabling Architecture

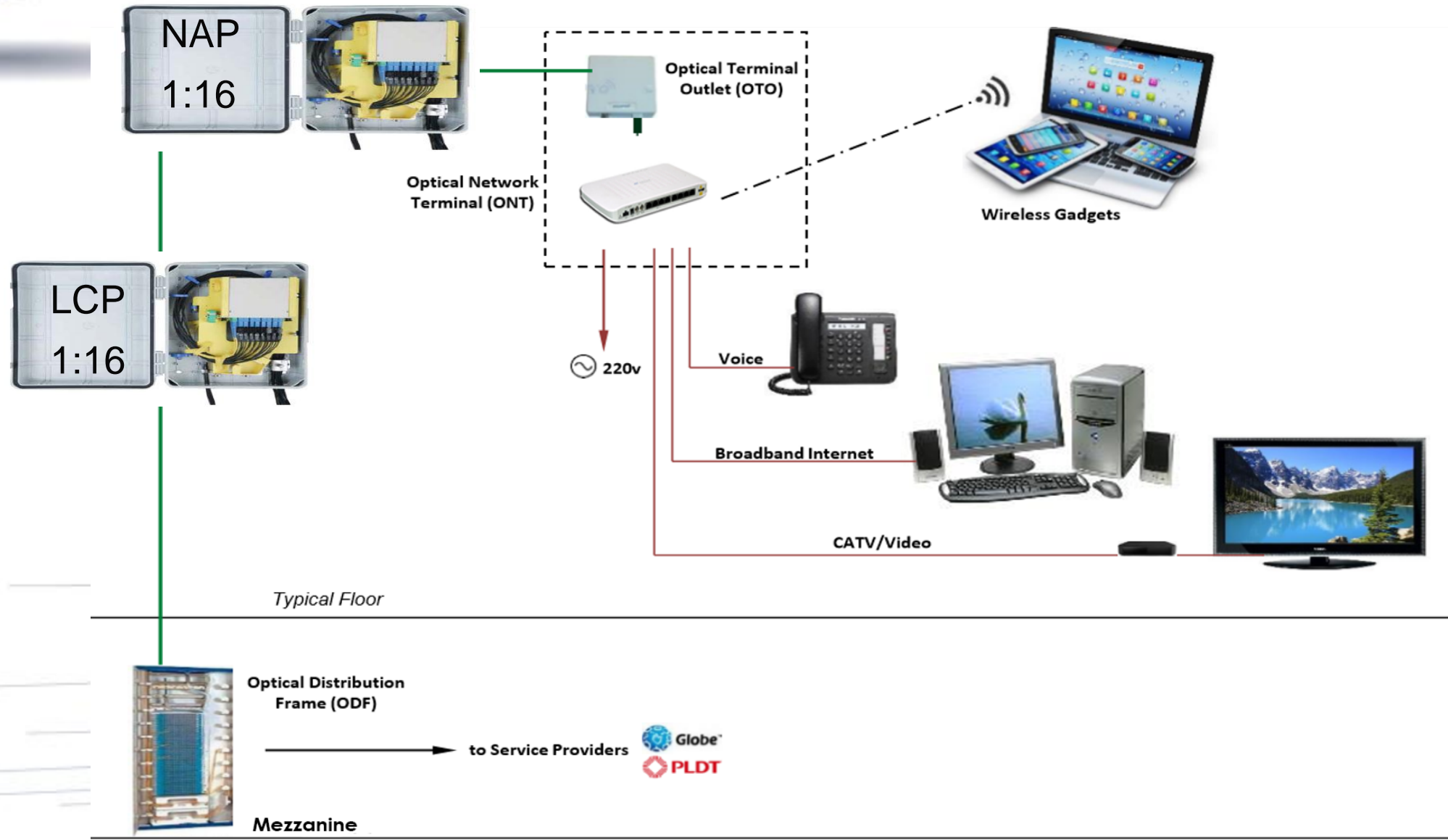
OPTICAL DISTRIBUTION NETWORK WITH POLE MOUNT NAP AND LCP





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

FTTx Cabling Architecture



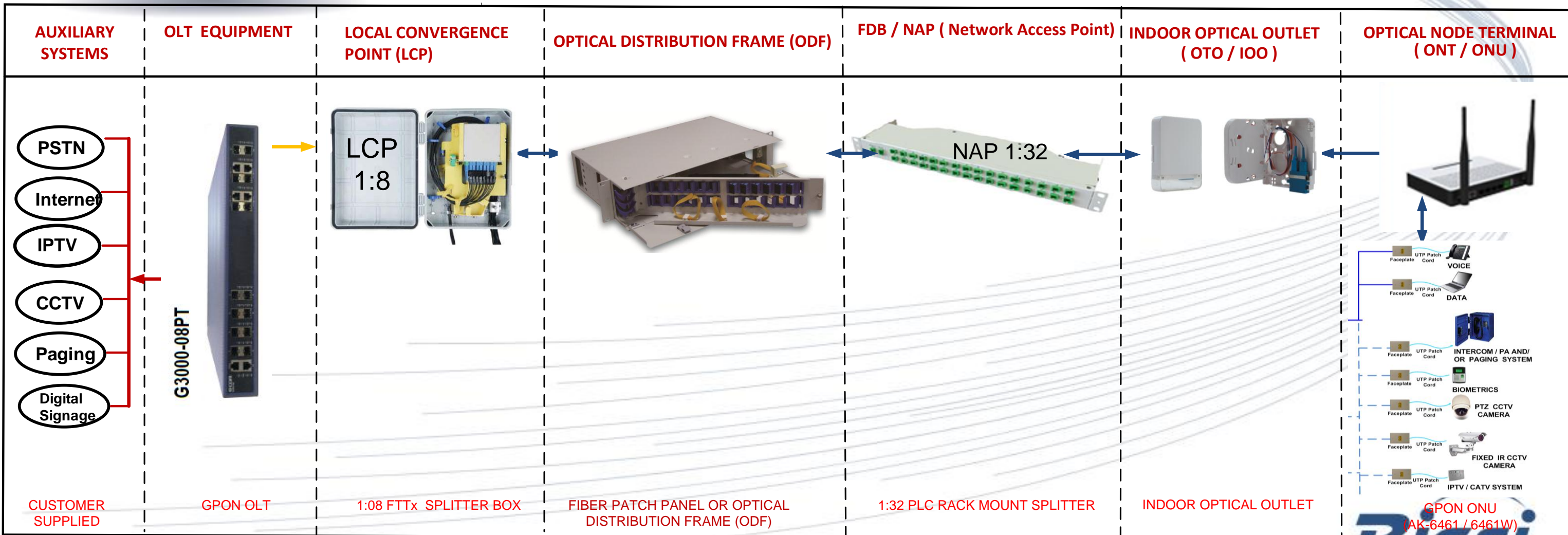
SINGLE LINE PICTOGRAM – TYPICAL UNIT



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

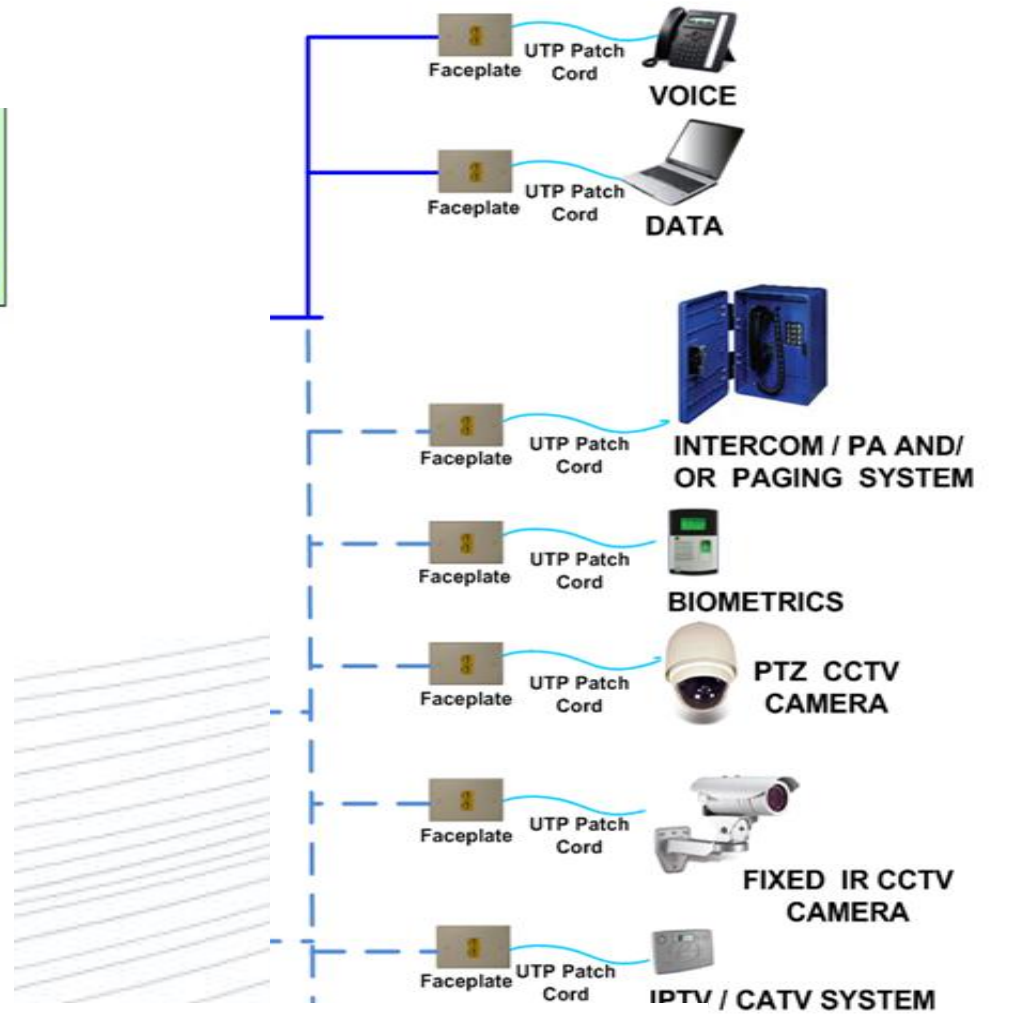
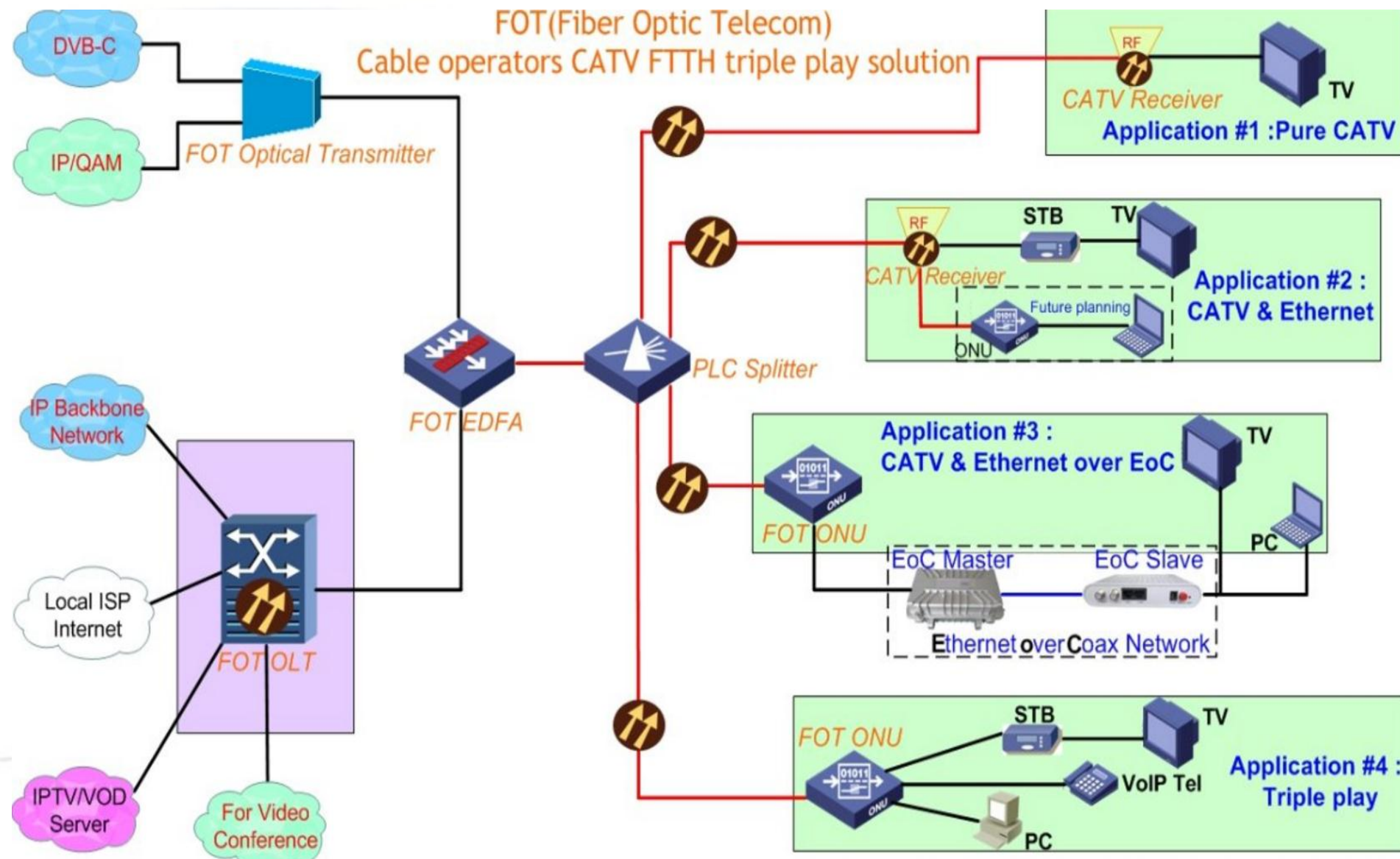
FTTx Cabling Architecture

GPON FTTH EQPT. REQUIREMENTS (FOR TELECOMS AND ENTERPRISE NETWORK)



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

FTTx Cabling Architecture



DIGITAL SIGNAGE WALL BOARD



Bicsi



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

GPON FTTx Business Models

- 1. HOSTED SET-UP / MANAGED SERVICES**
- 2. INFRASTRUCTURE AS A SERVICE (IaaS) / Software As A Service**
- 3. NEUTRAL HOSTING**
- 4. LEASE TO OWN MODEL AND/OR**
- 5. SUBSCRIPTION MODEL**



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Additional Revenue Streams : Thru GPON FTTx

- 1. CATV + INTERNET + CCTV**
- 2. CATV + INTERNET + CCTV + ACCESS CONTROL (BIOMETRICS) + DIGITAL SIGNAGE (Public Information Display Systems)**
- 3. CATV + INTERNET + CCTV + ACCESS CONTROL (BIOMETRICS) + DIGITAL SIGNAGE (Public Information Display Systems) + Home Automation Systems**
- 4. CATV + INTERNET + LGU STREET CCTV + INTELLIGENT TRAFFICE MANAGEMENT SYSTEMS + FLOOD WARNING SYSTEMS + PARKING MANAGEMENT SYSTEMS**

NOTE :

CATV Operators also means other Service Operators such as Telecoms Operators, ISP's,

VAS providers





LGU HOTLINE

ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

Concept:

- Set up a local multimedia hotline for the entire city, wherein residents can reach the contact center using landline phones, mobile phones and pc
- A centralize Network operating center for the entire local government unit

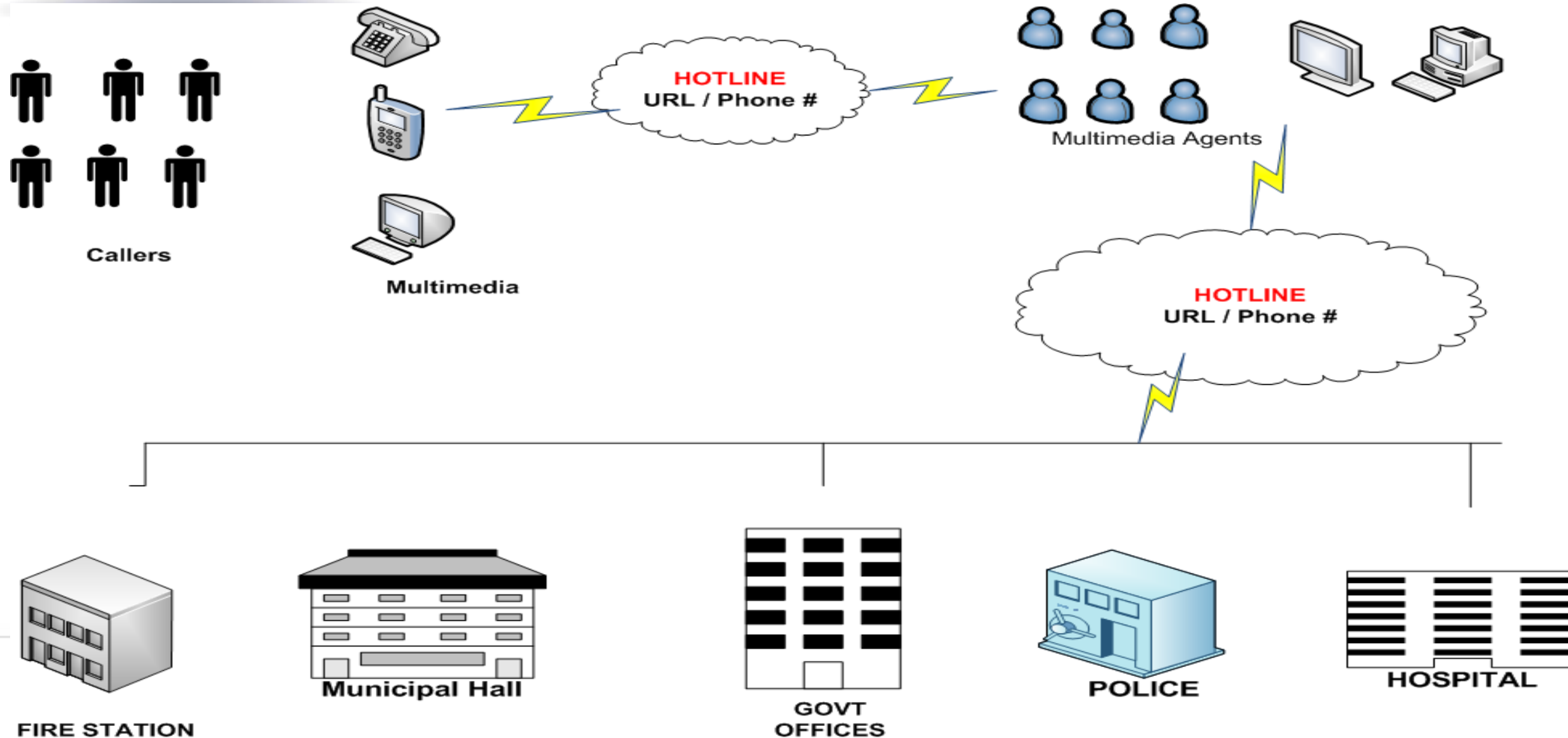
Purpose:

- 911 service
- General inquiry
- Survey and feedback
- Control center
- Public information services
- Etc...



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

Implementation: In Partnership with telecom operators / PAPTELCO's

- Hosted set up and managed services on a call center platform
- Agents can be located anywhere
- Use of existing infra
- Publish new hotline number per municipality
- Use of CRM for incident logging, caller profiling and escalation procedure
- Create database for all partner establishments
- Create inquiry and dispatch procedure for the partner establishments



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

Digital Signage

Private Network Program

Create and manage your own, exclusive digital signage network thru DS Solutions

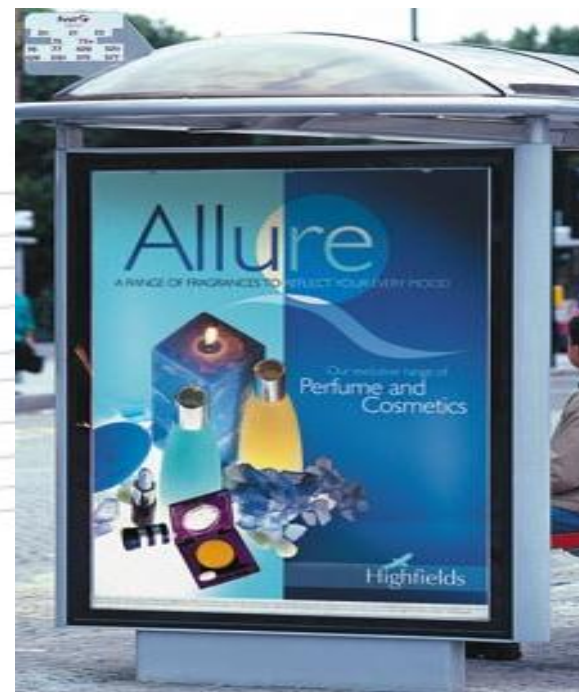




ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

to provide PCTA member-operators with additional revenue streams by availing the Digital Signage Network Program as reseller-operator of Digital Signage Business in their area/s of operations.



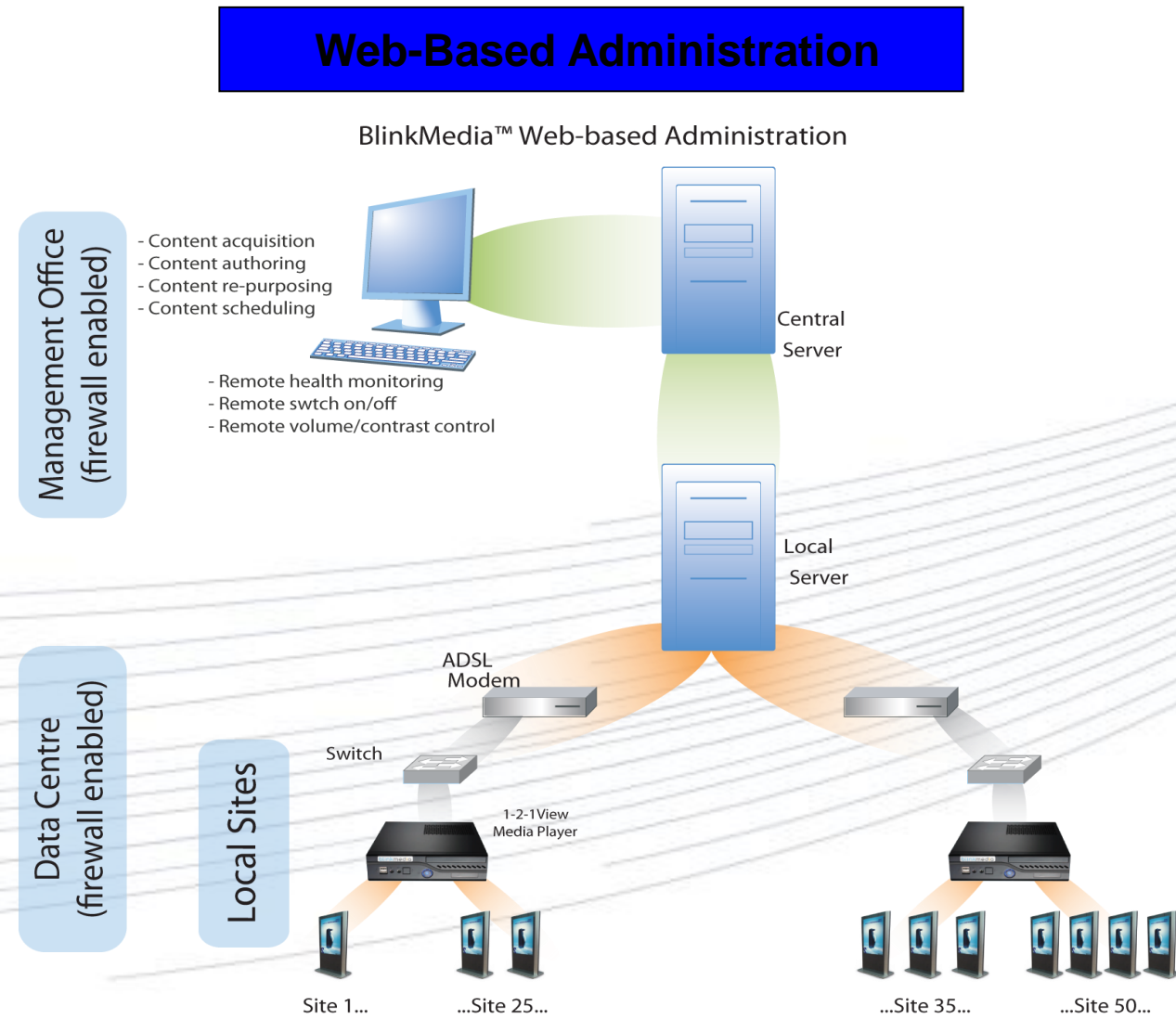


ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

Utilizing our DS Solutions and subscribing to its “**Software as a Service**” platform, PCTA member-operators can now provide new value add service delivery enhancements to its existing and new corporate clients by bundling Digital Signage solutions w/ its CATV and internet subscription.

Other **SaaS applications such as time and attendance solution, general inquiry or concierge assistance, public service, etc.** combined with DS can also provide value add service delivery enhancements to PCTA member-operators customer – clients.





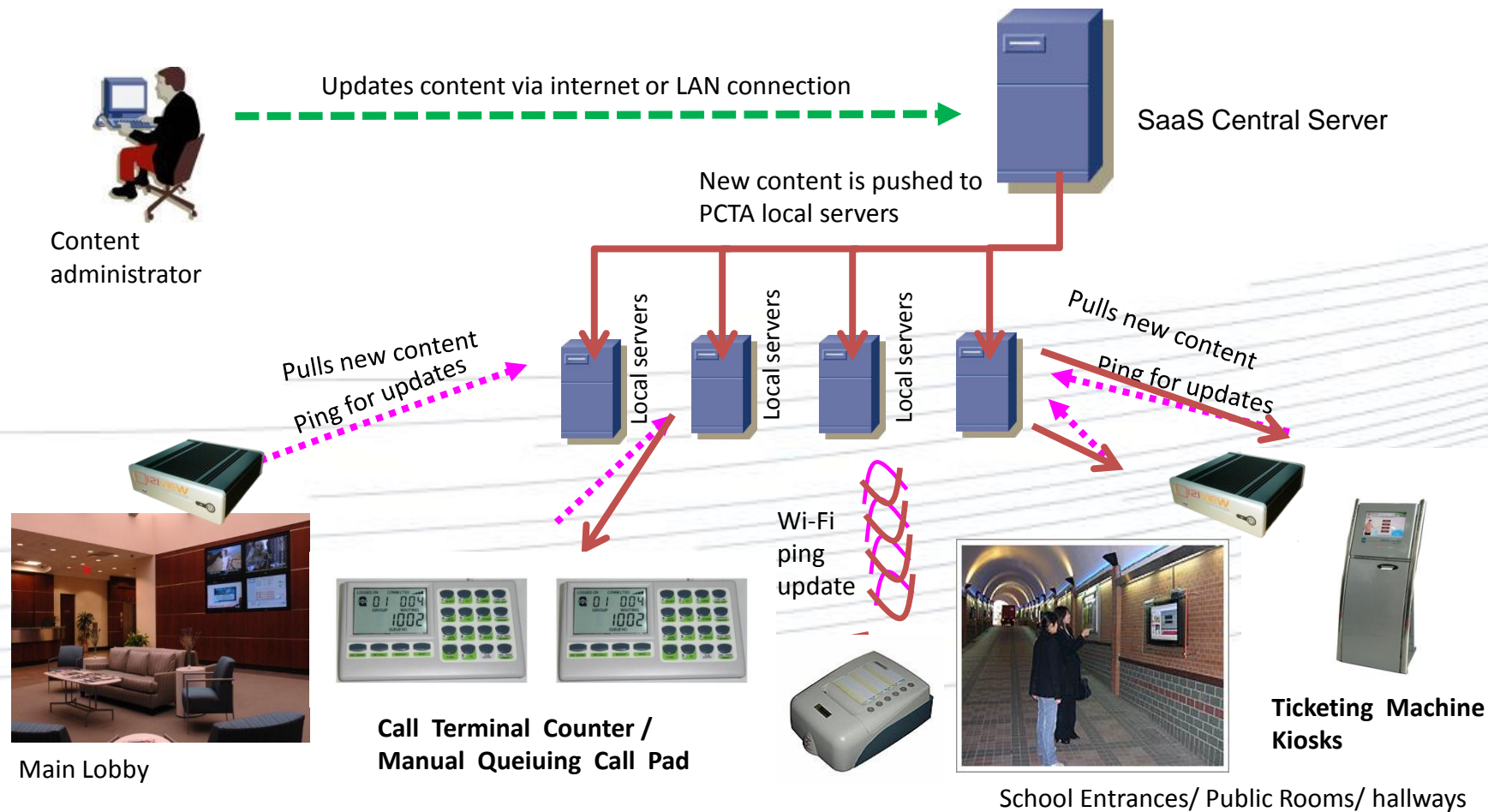
ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

What is Digital Signage?

Digital signage is more than a flat screen display running full screen TV or Powerpoint. Digital signage is about centrally controlling your network of displays enabling you to get your message to your audience at the right time.

The simple structure of an INDOOR DIGITAL SIGNAGE PRIVATE NETWORK looks like:



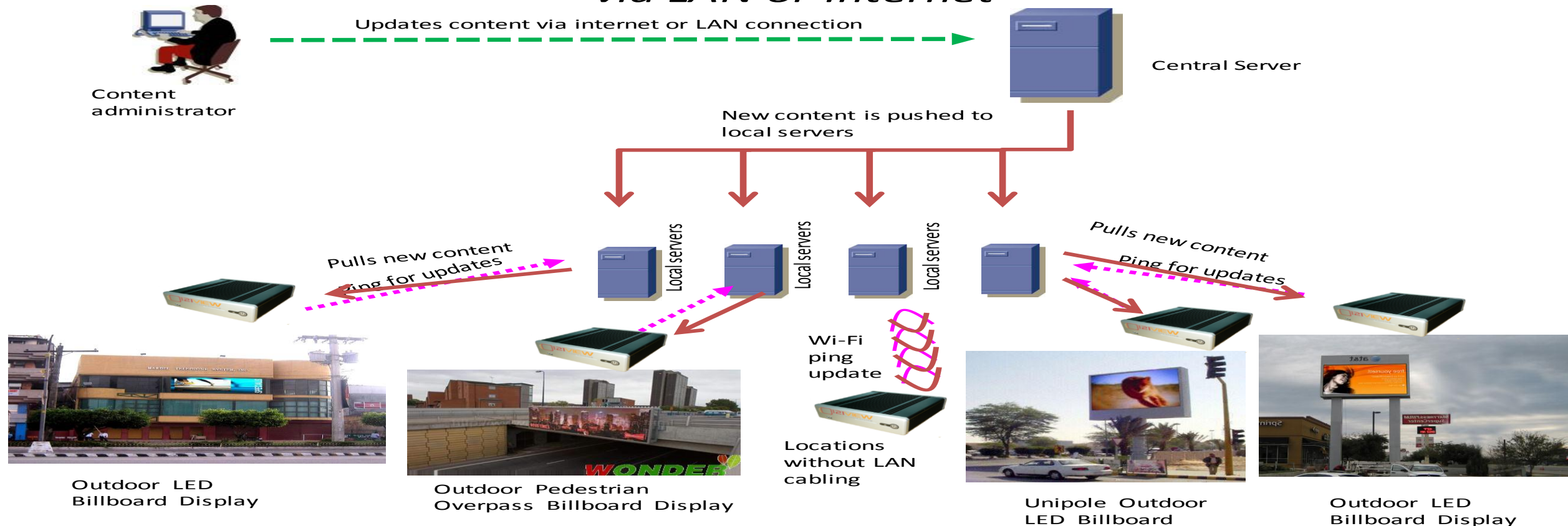


ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

The simple structure of an OUTDOOR DIGITAL SIGNAGE PRIVATE NETWORK looks like:

The Network Setup *via LAN or Internet*





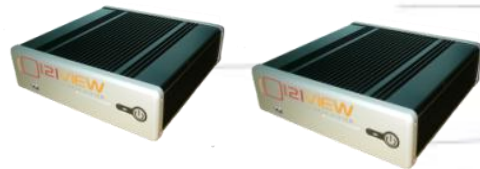
ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx



LOCAL SERVER

Content administrator



MEDIA PLAYER/S



42" Smart LED TV

INTERACTIVE KIOSK



video

application

IP phone

Flip open keyboard

E-PLDT GSIS

Information Kiosk

Dimensions:
Height 6Ft
Width 20in.

Material:
Steel

Finish:
Acrylic paint





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx



Ticketing Machine with 6 service buttons



Call Terminal Counter



Ticketing Machine Kiosks

SEP 15, 2009
Tuesday
9:42:57 AM

PAYMENTS	NOW SERVING	COUNTER
Real Estate Tax	2409	42
Business Tax	7701	61
Senior Citizen	8101	63

WELCOME TO QUEZON CITY HALL

an interactive kiosks with Queuing SW

Globe Abot mo ang mundo. Monday 22 MAR 10

PAYMENTS	ROOM
1005	1 ROOM
SALES	ROOM
2003	2 ROOM
AFTER SALES	ROOM
3002	3 ROOM
PROMO	ROOM
0002	4 ROOM

WELCOME TO THE JPMORGAN CHASE AND CO. CA





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

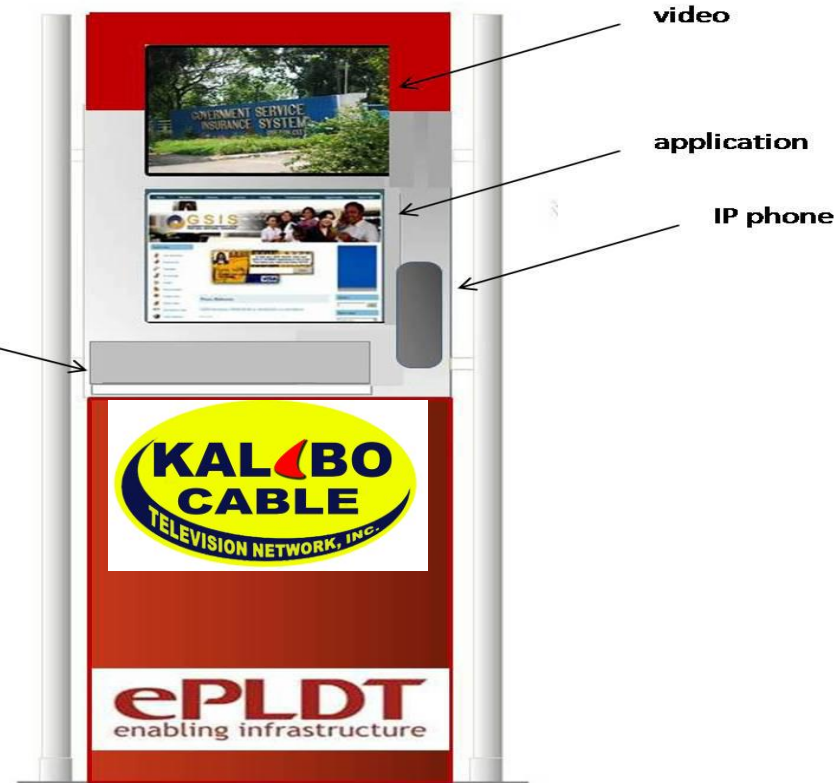
Sample Additional Revenue Streams : Thru GPON FTTx

PROJECT BACKGROUND AND OBJECTIVES :

1. Create a concierge type contact center to cater to all tourist in Boracay
2. To address the requirement of Boracay Island to consolidate all the telephone numbers of hotels and restaurants and other establishments into a single hotline number.
3. The intention is to cater to local and tourist customers mainly for hotel bookings and reservations, tourist assistance, general inquiry, bus and ferry ticketing system and public service



Flip open keyboard



**E-PLDT
GSIS
Information Kiosk**

Dimensions:
Height 6Ft
Width 20in.

Material:
Steel

Finish:
Acrylic paint





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

•TARGET MARKET

- All hotel, restaurants and other establishments in Boracay including other tourist destinations
- Estimated total number of establishments in and around Boracay is 500

•MARKET OPPORTUNITY

• Cost Drivers:	KALIBO CABLE
CAPEX	VARIABLE (subscription or purchase model)
OPEX	VARIABLE (subscription or purchase model)

•PRICE STRUCTURE

- 1.One Time set up fee
- 2.Monthly recurring cost
- 3.Pay per use scheme



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

Revenue stream opportunities

1. Monthly recurring cost MRC for all subscriber
2. Commission or referral fee from establishments for confirmed bookings
3. Advertising fee for ad placement in our “kiosk”
4. Revenue from telemarketing or outbound campaigns
5. One time set up fee
6. Cloud computing platform usage

	BASE	STRETCH
Year 1 One time fee (OTF)	10 establishments/ mo @3k set up fee = 30k / mo OTF = 360k / yr OTF	20 establishments/ mo @ 3k set up fee = 60k / mo OTF = 720k / yr OTF
Year 1 Monthly recurring cost (MRC)	MRC of 1k / mo = 10k / mo MRC = 120k / yr MRC	MRC of 1k / mo = 20k / mo MRC = 240k / yr MRC

***Additional revenue streams if client/s requested PCTA member-operator on customized content solutions, content management system maintenance, and supply of additional hardware appliance.





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

SUGGESTED CLIENTS :



1. Local Gov't. Public Information Display System (LGU TV)
2. Government Public Offices and Other Institutions (MED TV)
3. Schools, Universities, etc. (CAMPUS TV)
4. Bus Terminals, Airports, etc. (IN TRANSIT TV)
5. Malls, and other public places (SM TV)
6. Corporate Offices (CORP. TV)
7. Hospitality Institutions / Hotels (HOTEL TV)
8. Convention Halls, etc (INFO TV)
9. Restaurants, food courts, etc.



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

ADVERTISING RATES

Bright Screen

**COST EFFICIENT -
OUT-OF-HOME
ADVERTISING**



42-INCH PLASMA SCREEN

PRIMARY LOCATIONS		
LOCATION	NUMBER OF UNITS	AVE. CAPTIVE AUDIENCE / MO.
PHILHEALTH		
1) Taft Ave., Mia	1	52,000
2) Quezon Ave., QC	1	61,000
3) Shaw Blvd., Pasig	2	50,000
4) Jupiter St., Makati	1	61,000
5) Sta Lucia, Cainta	1	52,000
6) Real Ave., Las Pinas	1	48,000
7) Monumento, Caloocan	SOON	
8) Boni Ave., Mandaluyong	SOON	
NATIONAL STATISTICS OFFICE		
9) D. Macapagal Ave., PC	4	99,000
10) East Avenue, QC	6	187,000
SECURITIES AND EXCHANGE COMMISSION		
11)	3	55,000
SOCIAL SECURITY SYSTEM		
12) East Ave., QC	1	187,000
MAKATI CITY HALL		
13)	2	55,000
OVERSEAS WORKERS WELFARE ADMINISTRATION		
14) Intramuros	1	44,000
DEPARTMENT OF FOREIGN AFFAIRS		
15)	SOON	
SECONDARY LOCATIONS		
LOCATION	NUMBER OF UNITS	AVE. CAPTIVE AUDIENCE / MO.
AFPSLAI		
16) Bonifacio	1	26,400
17) Aguinaldo	1	26,400
18) Crame	1	22,000
Total Number of Units	27	
*Total Monthly Audience		1.02M

*As of June 2010

**GIVES ADVERTISERS
OPTIMAL REACH
AT MINIMAL COST**

**ADVERTISING RATE
(30 Sec. TVC)**

PRIMARY
PhP 15,000.00 / location / month
16 30s / day

SECONDARY
PhP 12,500.00 / location / month
16 30s / day

NEWS CRAWLER WITH LOGO
PhP 15,000.00 / location / week
with 16 Daily TVC30s spot

FULL-SCREEN WEATHER UPDATE WITH LOGO
PhP 15,000.00 / location / week
with 16 Daily TVC30s spot

TERMS

3 months minimum contract

ADVERTISING MATERIALS

Requirement: DVD or AVI format

We accept production or editing of ad materials. Costs subject to negotiation.

Visit us at www.pdposterads.net





ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Sample Additional Revenue Streams : Thru GPON FTTx

ADS TYPE	Exposure Time Span	1 Cycle Span (in minutes)	Number of Exposure			Number of AD Spots	COST OF AD PLACEMENT (1 Month, per Site)
			1 HR	1 Day	1 MO		
Video /Board Type Airing	15 Seconds	10 Minutes	6X	60X	1320X	1 Ad Spot	3,500.00
Video/Board Type Airing	15 Seconds	5 Minutes	12X	120X	2640X	1 Ad Spot	6,500.00

NOTE: Above prices are based on Package Price meaning Ad will be placed on all sites and is VAT EXCLUSIVE.

Available Sites:

Meralco Business Offices:

- | | |
|---------------------------|--------------------------|
| 1. Meralco Pasig | 13. Meralco Commonwealth |
| 2. Meralco Makati | 14 Meralco Valenzuela |
| 3. Meralco Kamuning | 15. Meralco Calamba |
| 4. Meralco Cainta | 16. Meralco Balintawak |
| 5. Meralco Marikina | 17. Meralco Paranaque |
| 6. Meralco Mandaluyong | 18. Meralco Rosario |
| 7. Meralco Tutuban | 19. Meralco San Pedro |
| 8. Meralco Novaliches | 20. Meralco Bacoor |
| 9. Meralco Roosevelt | 21. Meralco Las Pinas |
| 10 Meralco Baliuag | 22. Meralco Lucena |
| 11. Meralco Caloocan | 23. Meralco Balagtas |
| 12. Meralco Batangas City | |



Philippine Airlines – Makati Ticketing Office
Manila Central University Hospital – OPD

Philippine Heart Center – OPD and Billing/Cashier Dept.
Hi-Precision Diagnostic – Del Monte Branch



ADDITIONAL REVENUE STREAMS FOR SERVICE PROVIDERS USING GPON FTTx SOLUTIONS

Thank You

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