Fiber To The Home Roll out
Etisalat Implementation Case Study

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Agenda

- Background
- Why FTTH/ Why GPON?
- Deployment Strategy and Migration Plan.
- Challenges and Lesson Learned,
Background – Etisalat presence

Etisalat Group

Etisalat- UAE

Etisalat International investment

Etisalat Services Holding

Non core units support telecom sectors
Why FTTH?

1- The need for bandwidth.

2- The need for reliable service.

3- Cost of operation & maintenance of Copper network.
Why FTTH?

4- Life time of passive network.

5- Community & Economic benefit.

6- Environmental & energy saving.
Why P2MP/GPON?

1- Lower CAPEX & OPEX.

2- Single Platform for triple play

3- Efficient utilization of fiber.
Why P2MP/GPON?

4- Only passive equipment in the field.

5- Use P2P for specific commercial application to create best combination.
Why P2MP/GPON?
Deployment Strategy and Migration Plan

Early plan of fiber deployment:

1984 – first fiber cable in backbone


1997 – HFC deployed for CATV (e-vision service)

2004 – FTTH trial (P2P, P2MP) – Green field

2007 – 2011 FTTH/GPON Mass Market roll out (country wide deployment to migrate all existing customers)
Deployment Strategy and Migration Plan

Factors helped for easy deployment:

1- Since 1976 most of Etisalat cables are UG in duct (PVC pipes) result cost effective & faster replacement.

2- Availability of ROW and early incorporation of telecom requirement in building permit.
Deployment Strategy and Migration Plan

Factors helped for easy deployment:

3- In 2007, new guidelines for building design were established to incorporate the need for FTTH as part of building permits (cost of indoor work passed to building owners for Greenfields).

4- Relatively, most of UAE buildings are less than 20 years old, making it easy to replace indoor cables with fibers.
Deployment Strategy and Migration Plan

**Design Guideline:**

1- Awareness and communication plan (Customer and building owners engagement)

2- In 2005 issued new internal guideline and detail plan for migration to FTTH (regular review & modification to present V3) and accordingly the master plan prepared.
Deployment Strategy and Migration Plan

**Design Guideline:**

3- USE of GIS/CAD, fiber management and in house developed application for faster deployment and capture of record.

4- use of mix centralized 1:2 splitter and distribution 1:32.

5- Provision for dark fiber and P2P for commercial application.
Deployment Strategy and Migration Plan

Design Guideline:

6- Optimize with existing fiber FTTC/FTTB/HFC/ inter exchange fibers, avoid over or under capacity.

7- The brown and green field approached at the same time and with the same standard.
Deployment Strategy and Migration Plan

Field Implementation:

1- Prepare the market/contractors for FTTH, train more than 2000 technical staff – Use Etisalat academy - 2006.

2- Develop tools & process for field technician for easy service migration.

3- issue standard installation guideline for filed technicians
Deployment Strategy and Migration Plan

Field Implementation:

4- Mass roll out in phases:
   - Phase 1: High dense residential area in main cities.
   - Migrate only Telephone and high speed internet.
   - Phase 2: Commercial buildings – Q4-2009.
   - Introduce new package (eLife double play Dec2009).
   - Phase 3: Low dense residential, small cities and remote (eLife Triple play May 2010).
Deployment Strategy and Migration Plan

Work Force Management

1. Optimization of manpower and technology.

2. Better transparency / Control to CST management

3. Avoid paper work – Automation in work order processing and closing.
Deployment Strategy and Migration Plan

Fibre Network Monitoring System

1. End to end Monitoring of all FTTH Components.
2. Quick abnormality detection and fault maintenance.
3. Increase customer satisfaction
Deployment Strategy and Migration Plan

Residential Gate Way (RGW)

1. Convergence of Voice Data and Video

2. Enhanced Customer experience

3. Applications hosting Platform for future services (Home Automation, health management)
# Challenges and Lesson Learned

## 1- The internal impact of this change

- Get all department involved from day one.
- Create PMO office for FTTH roll out.
- Pay attention to details – mainly IT & legacy database.
- Review & Change the technical & operation Guide on regular basis.
- Optimize with existing Fiber network (FTTC, HFC, ..
- start with simple, easy migrate cases & areas.

## 2- Resource & Skills

- Early announce the need for resource & subcontractors (region and country level).
- Create training and certification reference.
- Adjust at economic growth & recession.
- Develop communication and change plan with multi contractors (+35) and thousands of technical saff (+2000).
- Qualify for Turn Key.
# Challenges and Lesson Learned

## 3- The customer Experience Management
- Communicate the advantage not the technology.
- Define and update the roll out plan & progress for easy customer reference.
- Adjust priority based on demand & higher interest.
- Manage Access to customer premises & last mile connectivity.
- Manage and update the standard for indoor cabling (green & brown areas)

## 4- Consider other technology
- use P2P for specific commercial need.
- Use 3G & other Wireless technology for low dense + remote areas.
- The copper network still available & working.

## 5- The service delivery & penetration
- Fiber management & customer records.
- Bundle but simplify (eLife)
- Add product and application as you go.
THANK YOU

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