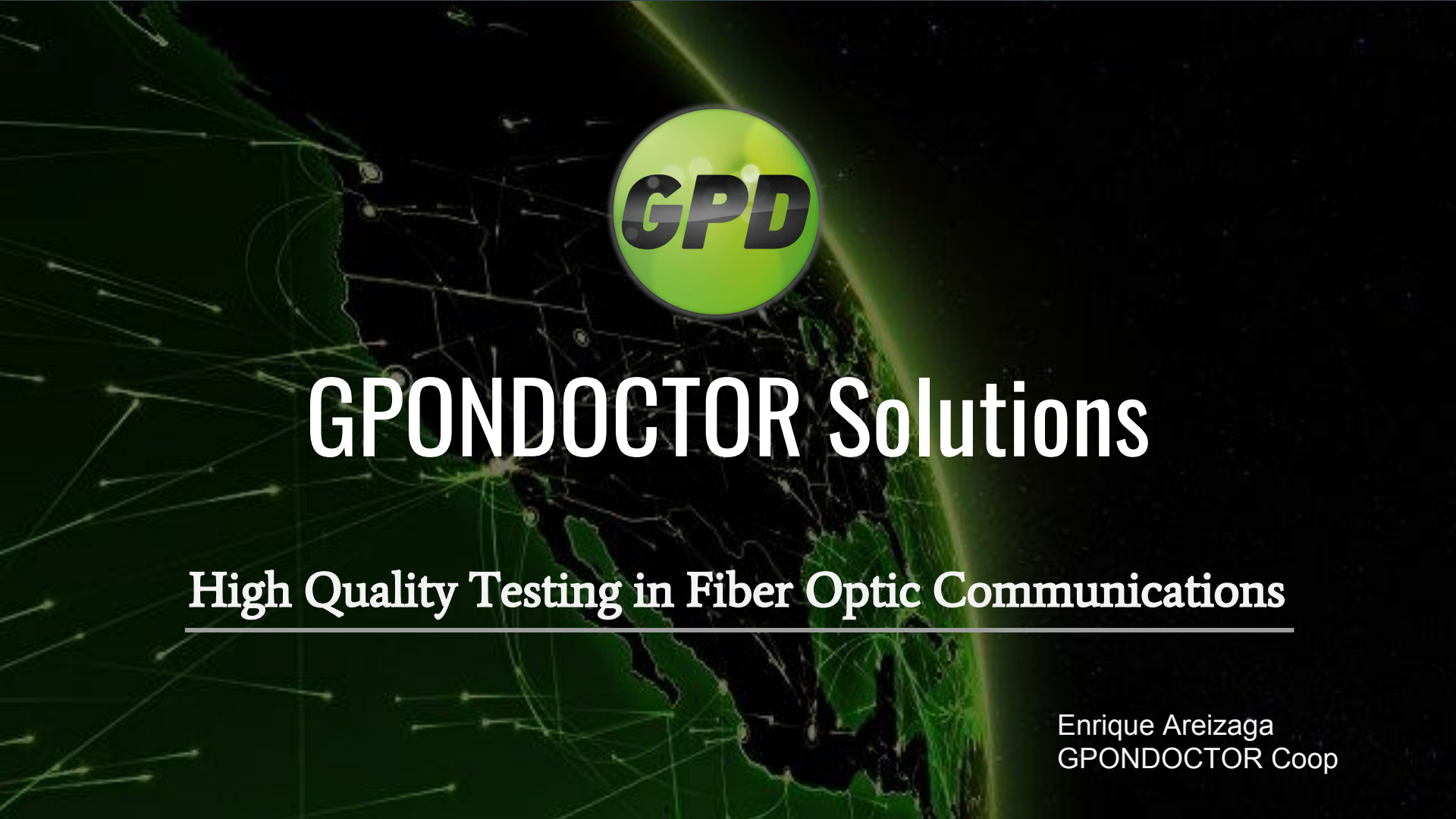


GPONDOCTOR Solutions

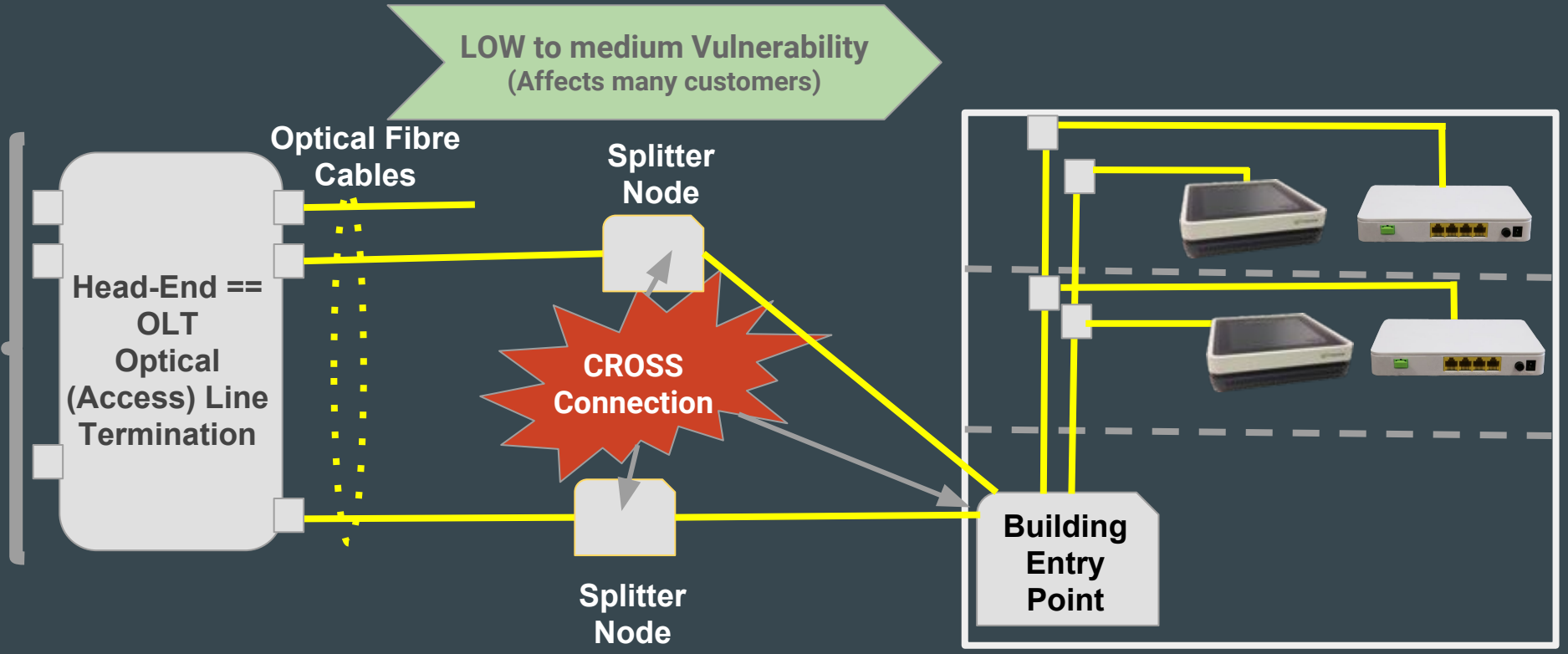
High Quality Testing in Fiber Optic Communications

Enrique Areizaga
GPONDOCTOR Coop

The Cost of Poor Quality in Telecom Services

A broader definition of Bad Quality makes the hidden portion of the iceberg more apparent

Quality is heavily impacted by cross connections attributed to the contractors workmanship as well as patch leads



HOW do I Know
if a Fiber is
not cross
connected?

Installers current alternatives

Power meters

- Only required to check that the power received is above Sensibility threshold
- Cannot detect cross-connections

OTDR

- OTDR is an instrument that is used widely to evaluate the characteristics of an installed fiber optic link
- It measures optical fiber parameters such as attenuation, length, optical connector and splices loss
- Cannot detect cross-connections

Validation through OLT NMS

- It can detect cross-connections but requires the coordination between the contractor workmanship and the Telco’s Network Management engineers

FTTH Telcos current alternatives

Portals

- Once the service is connected, the installer gets access to a portal within the Walled garden and introduces the service number of the installation. OSS Internal services check that the Circuit-id got by the AAA (with the “IP Address” used by the installer to connect to the portal) matches with the pre-provisioned “Circuit-ID”.

Ad-Hoc solutions

- Installers use an application to get their GPS location and pictures and uploads this information into the Telcos cloud.
- Installer is identified by a 10-Digit Password. His ONT has to be registered and deregistered.
- Telcos SW matches data from Installer app with OLT data

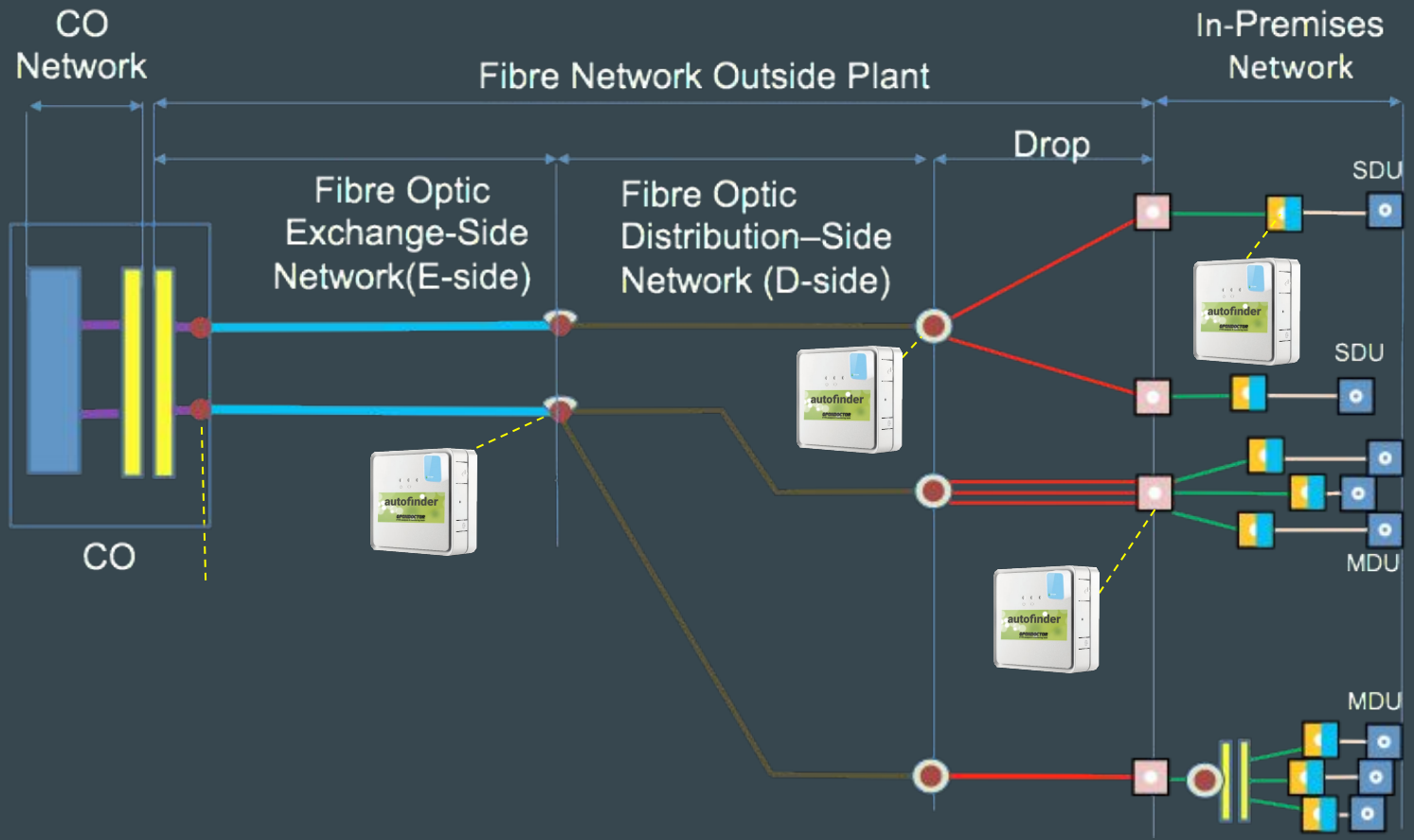
Manual coordination

- Installer calls Telco engineer to get the PON port every time it connects its ONT to a FTTH optical termination.

Advantage of GPON Autofinder

- **INDEPENDENT**: Contractors' workmanship do not need to involve FTTH Telco's engineers to audit the network
- **FAST**: you can get all the data from all Splitter outputs in minutes.
- **TRUSTED**: Information obtained is 100% Reliable
- **EASY TO CARRY**: Super Compact (11x11 cm) and lightweight
- **EASY TO USE**: ONE button to get all information at your Smart Phone/ Tablet/ Laptop (including Geolocation)

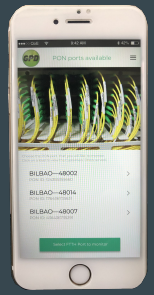
Cross Connection Auditing.... ANYWHERE in the PON



GPONDoctor autofinder options

GPONDoctor autofinder

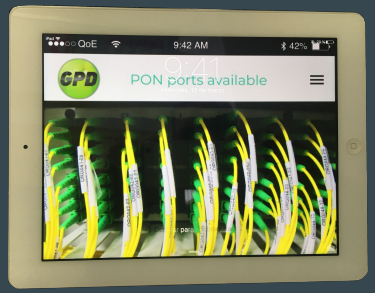
Adaptor to power autofinder from USB



App for Smartphone

GPONDoctor autofinder with WIFI

External battery for GPONDoctor autofinder



App for Tablet

- **FTTH deployments** might have issues like transposed fibers caused by human error when connecting a fiber to a wrong splitter port
- **Cross connections** increase operational costs (OPEX)
- **GPONDOCTOR Autofinder** audits the FTTH deployment enhancing its Quality while diminishes costs

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