FTTH Testing - Centralized Construction and Provisioning using the ONMSi solution

A Centralized Solution not ONLY FOR Maintenance

Construction

- Certified network qualification
- Automatic method and procedure
- Automatic network inventory update
- Network construction tracking

Provisioning

- Instantaneous subscriber qualification
- Automatic method and procedure
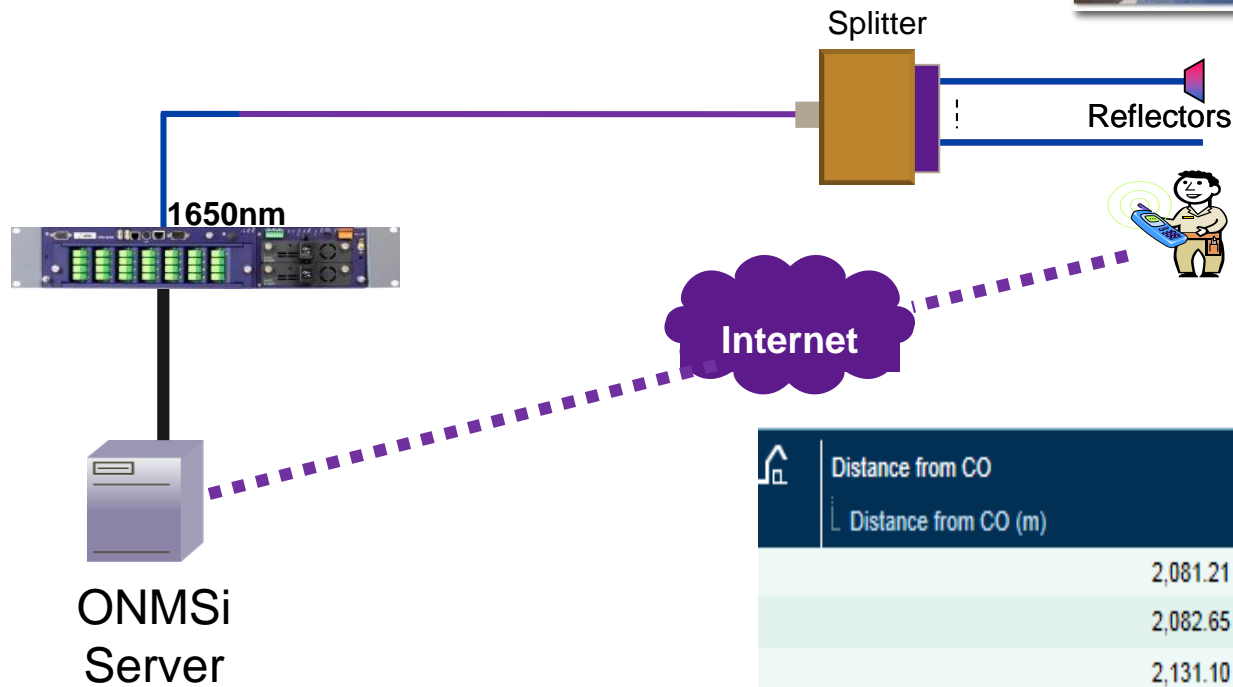- Subscriber self-install enablement
- Measurements are certified

Maintenance

- Shorter mean time to repair
- Demarcation between ONT and Fiber fault
- Dispatch to fix not to understand
- Pro active maintenance

VIAVI

Network qualification

✓ Simple and effective process to qualify PON Construction
✓ All tests are automatically registered
✓ Measurement are certified
✓ Only one technician with basic optical qualification is needed.
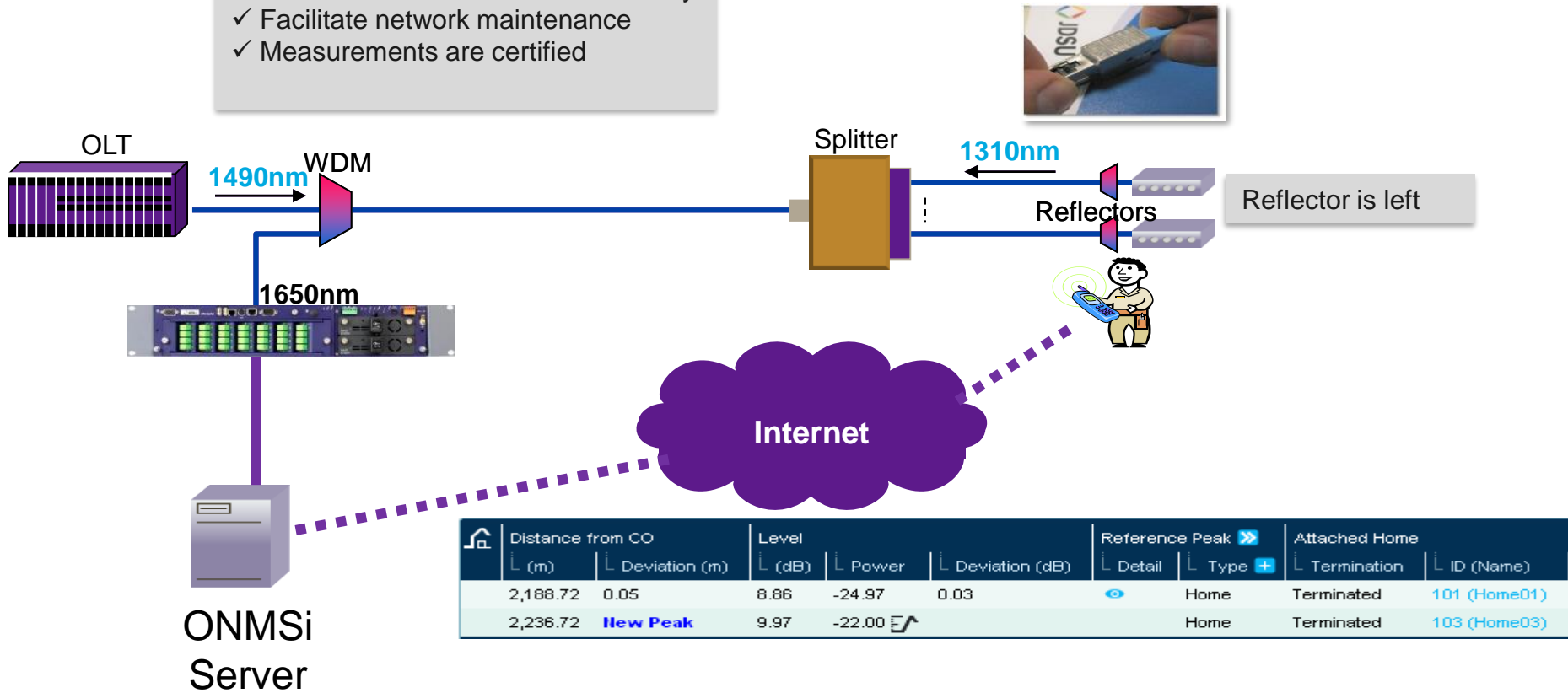✓ No test set is required
✓ Deployment follow up

Splitter

Reflectors

Reflector is moved from one termination to another or the reflector is left at each termination

1650nm

Internet

ONMSi
Server

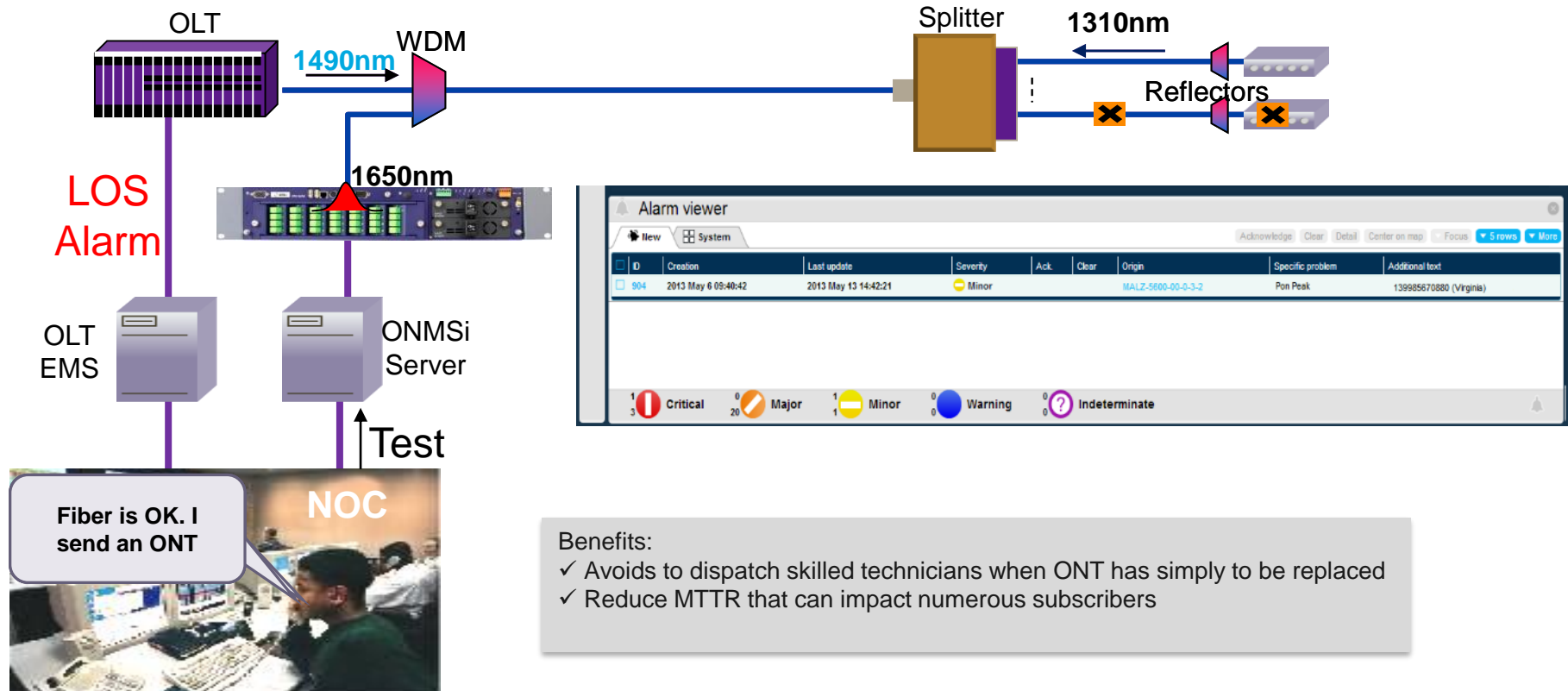|	Distance from CO		Measurements		
	Distance from CO (m)		Insertion loss (dB)		
		2,081.21		29.17	Failed
		2,082.65		24.15	Passed
		2,131.10		24.58	Passed

Network Provisioning

Benefits:
- ✓ Accurate record in network inventory
- ✓ Facilitate network maintenance
- ✓ Measurements are certified

OLT

WDM

1490nm

Splitter

1310nm

Reflectors

Reflector is left

1650nm

ONMSi
Server

Internet

Distance from CO		Level			Reference Peak ≫		Attached Home	
(m)	Deviation (m)	(dB)	Power	Deviation (dB)	Detail	Type ➕	Termination	ID (Name)
2,188.72	0.05	8.86	-24.97	0.03	👁	Home	Terminated	101 (Home01)
2,236.72	New Peak	9.97	-22.00			Home	Terminated	103 (Home03)

VIAVI

Trouble shooting

Summary

- Proper care of fiber cabling
  - Dressing of cables
    - Bends, crushing, etc
  - Capping unconnected fibers
  - IBYC
- Having, and following established procedures – consistency of contract and internal work force
- Cable layout – documentation of as-built with "birth certificate"
- Correct routing of fibers – from splitter and hub (PON-ID)
- Technical skills/training – pre-defined test procedures, including pass/fail criteria and set-up parameters.
- Centralized monitoring/testing of fiber portion of PON network (one fiber fault can affect many customers)

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