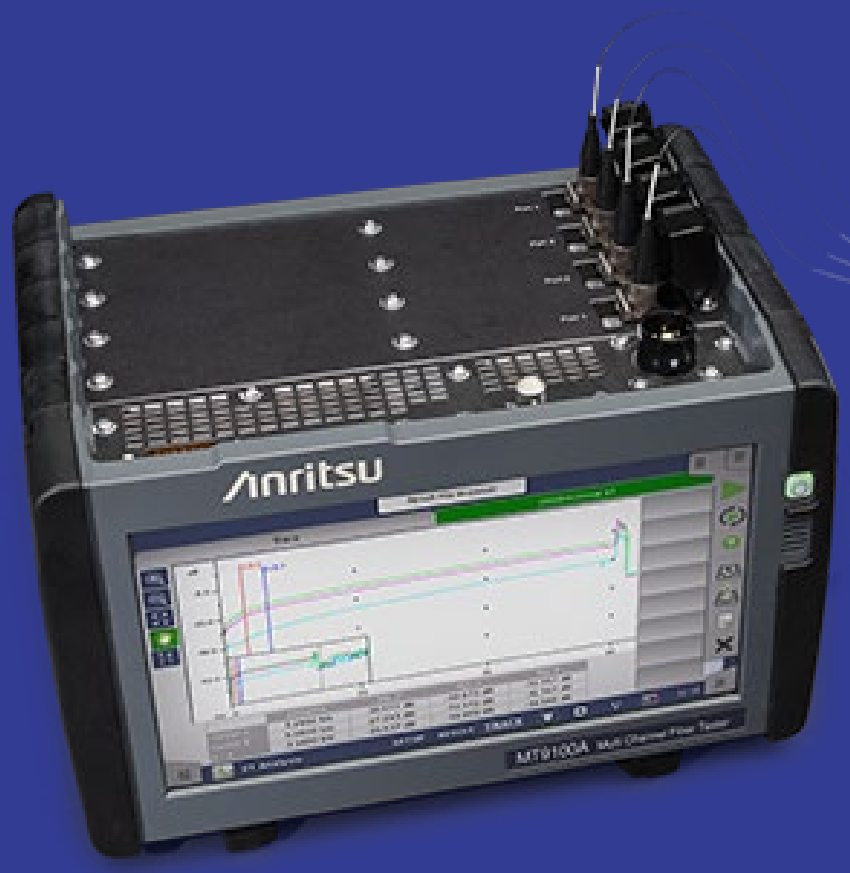
TRS RenTelco℠ Anritsu

WEBINAR



How to Test Multicore Fiber Links Without Guesswork

Thank you for joining us. We will begin shortly

LIVE WEBINAR | May 19, 2026

Agenda

1. Welcome and Introductions
   - Lindsay Welch, TRS-RenTelco Marketing Manger
2. TRS-RenTelco: Test & Measurement Solutions
   - Micah Hurd, Product Manager
3. Anritsu: How to Test Multicore Fiber Links Without Guesswork
   - Matt Brown, Fiber Optics Expert
4. TRS-RenTelco: Equipment & Special Promotions
   - Micah Hurd, Product Manager
5. Q&A – Joint TRS and Anritsu

TRS RenTelco

Test & Measurement Solutions: Rent, Lease, or Buy

Plan, acquire, and efficiently utilize instruments to maximize return on investment.

- End-to-end fulfillment from our Dallas, TX headquarters
- 5,000+ configurable models available, valued at over $500MM
- In-House Financing and flexible procurement programs to Rent, Lease, or Buy
- State-of-the-Art 20,000 sq ft Calibration Lab on site
- Same-Day-Shipping with Next Day Delivery Available

A proud member of the
McGrath Family of Businesses

mobile modular Portable Storage
TRS RenTelco
mobile modular
enviroplex

Why Do Customers Choose TRS-RenTelco?

Customer Service Excellence

Talk with a **Live Person** when you call

Extended Technical Sales Hours from 7am – 7pm CT

Late-Order processing

Comprehensive Solutions

Customized **In-house Financing**

Deep and wide **Inventory**

Equipment ships **Ready To Use**

Fulfillment Accuracy & Speed

Same-day Shipping

80% of Calibrations Performed In-house

99.72% Customer-Scored Equipment Quality Ranking

Reliable Expertise

Strategic singular focus on the rental market

Top-tier rental partner to all major manufacturers

Financially Secure publicly traded company

Anritsu Advancing beyond

MT9100A – Multicore Fiber OTDR

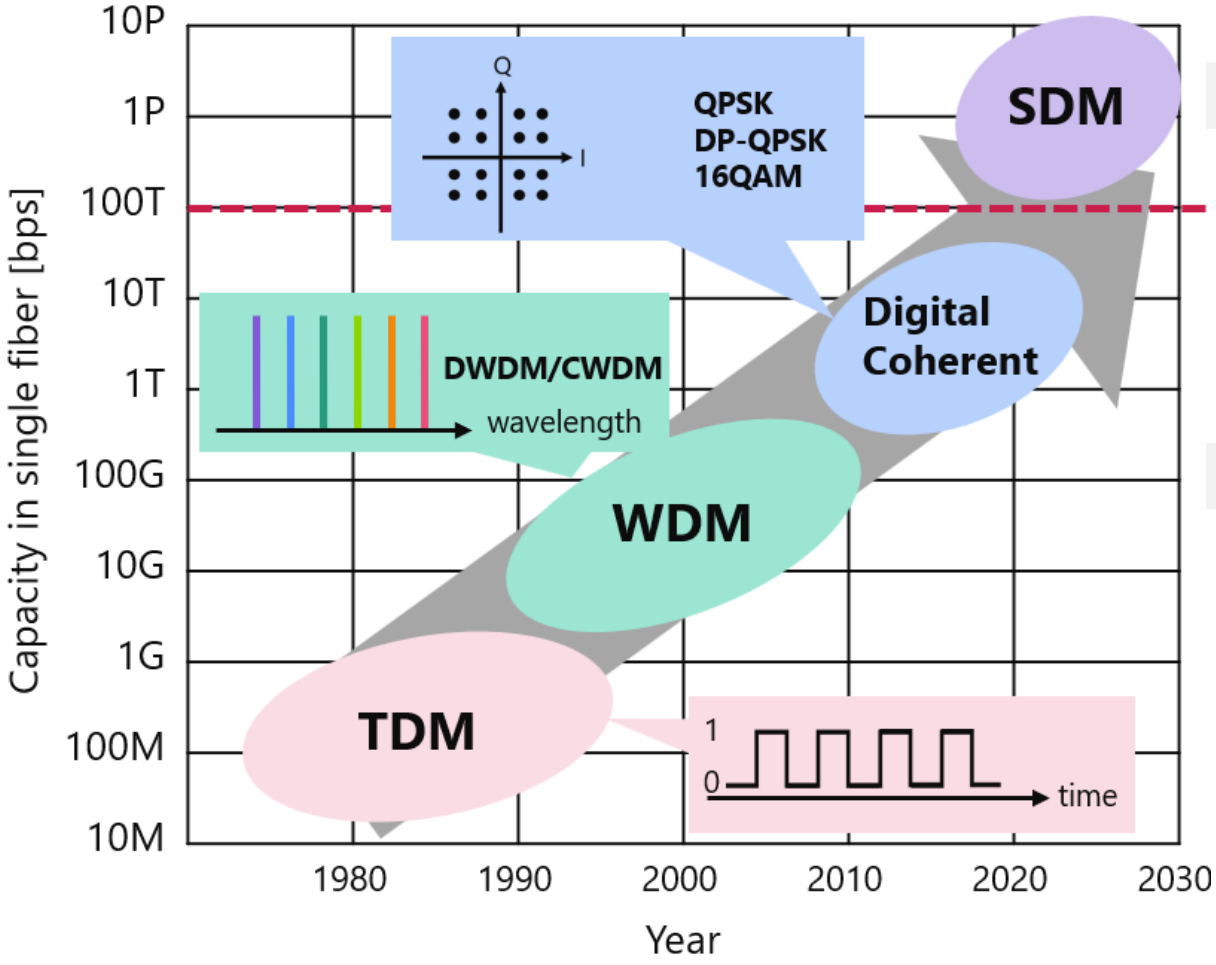
Matt Brown

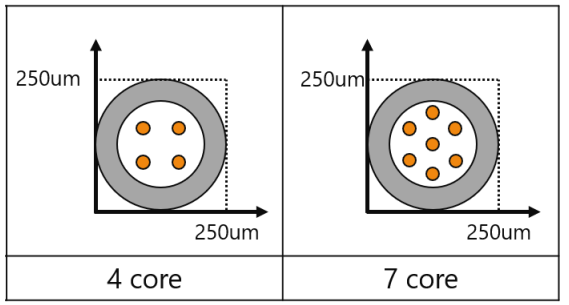
Business Development Manager

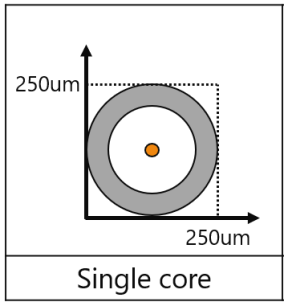
Anritsu Test & Measurement

Evolution of optical communication

What is the transmission capacity in single optical fiber?







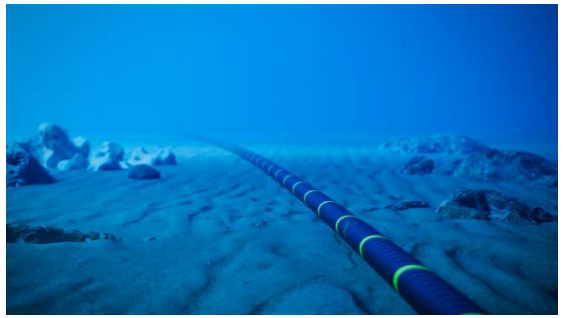
SDM : Space Division Multiplexing
TDM : Time Division Multiplexing
WDM : Wavelength Division Multiplexing
QPSK : Quadrature Phase Shift Keying
QAM : Quadrature-Amplitude Modulation

Datacom capacity requirements are accelerating at a remarkable pace

Space Division Multiplexing Market

Multicore Fiber applications for telecommunication.

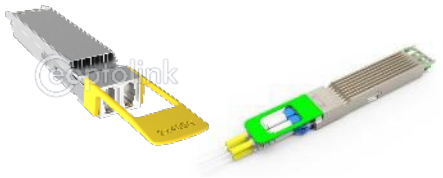
- **Subsea cable**
  - Google has already deployed **2-core MCF** in TPU (Tiawan) subsea link.



Reference : Delivering Multi-Core Fiber Technology in Subsea Cables | Google Cloud Blog

- **Rak to rack within Data Centers (~500m)**
  - Interconnect between multiple DC has opportunity.
  - Several companies have already announced **4core-MCF transceivers** for DCI.

Reference : Eoptolink Unveils Industry-First 800G Optical Transceiver for Multicore Fiber at OFC 2025



Reference : Hyper Photonix Unveils 800G Optical Transceiver for Multi-Core Fiber with Live Demonstration at OFC 2025

- **Data Center Interconnect (DCI)**
  - High capacity “metro” links (~100km) are being built with MCF vs SMF.

2026 MCF Commercial Releases

Links to MCF announcements, MSA and commercial releases

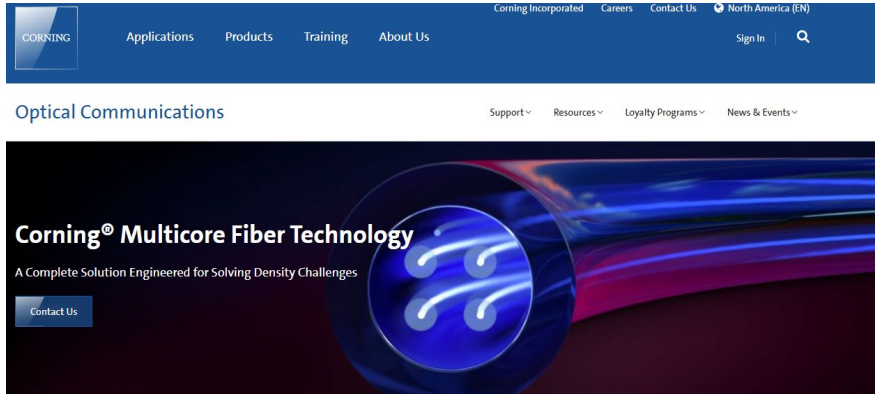
https://www.corning.com/optical-communications/worldwide/en/home/products/multicore-fiber-technology.html

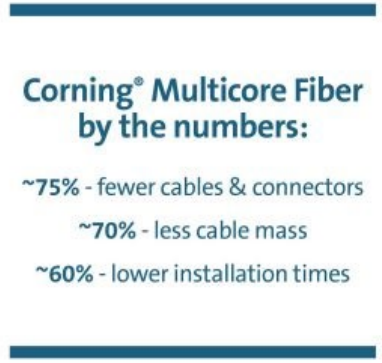
https://sumitomoelectric.com/press/2026/02/prs011

https://convergedigest.com/sdm4-mcf-msa-launches-to-standardize-4-core-fiber/

https://www.businesswire.com/news/home/20250331209692/en/Hyper-Photonix-Unveils-800G-Optical-Transceiver-for-Multi-Core-Fiber-with-Live-Demonstration-at-OFC-2025

https://www.businesswire.com/news/home/20250331209692/en/Hyper-Photonix-Unveils-800G-Optical-Transceiver-for-Multi-Core-Fiber-with-Live-Demonstration-at-





Datacom capacity requirements are accelerating at a remarkable pace

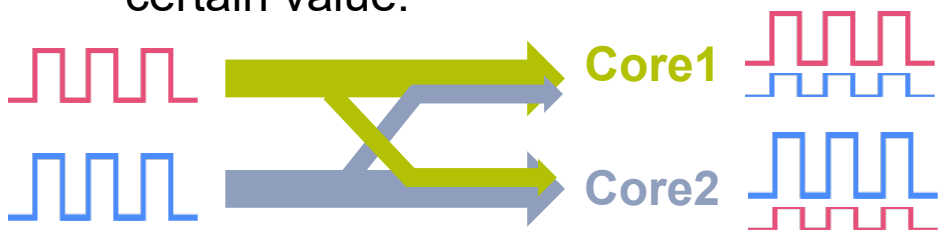
Space Division Multiplexing Market

Meanwhile, there are some challenges…

1. **Expensive system cost**
   - MCF cost is higher than single core fiber.
   - One of the reason is increasing inspection

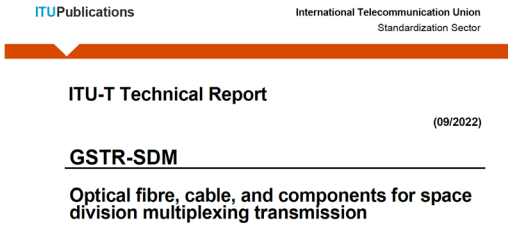
SMF < MCF

2. **Existence of inter core crosstalk(XT)**
   - XT has a possibility which degrade quality of transmission(QoT).
   - It must be confirmed suppressed lower than certain value.



3. **Standardization in progress**
   - ITU-T and IEC SC86A are publishing Fiber Specifications and Test Methods.

Against two challenges, Anritsu can offer solution as **multi-channel OTDR.**


ITUPublications
International Telecommunication Union
Standardization Sector

ITU-T Technical Report

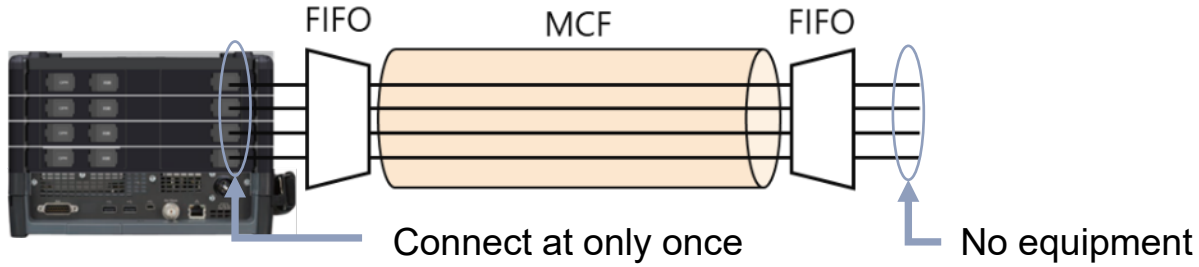
(09/2022)

GSTR-SDM

Optical fibre, cable, and components for space division multiplexing transmission

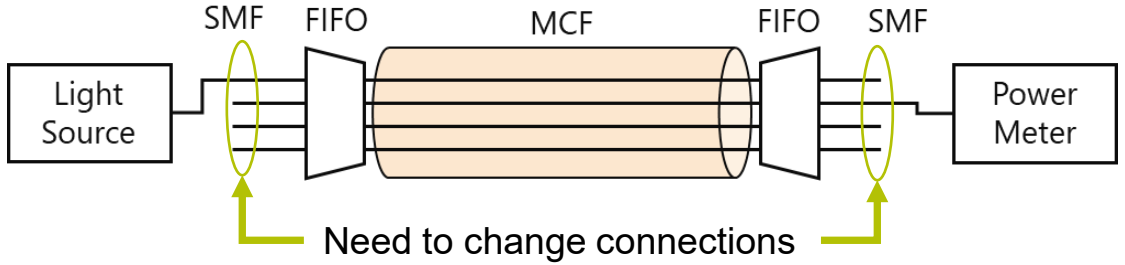
MCF Measurement Methods

●MC-OTDR



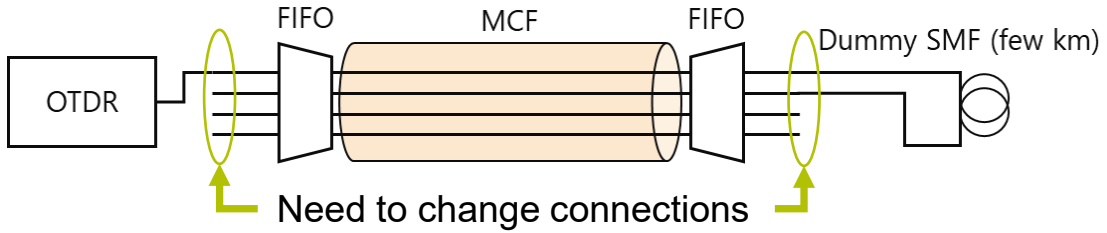
- No need to change connection
- No need an equipment at fiber end
- XT, Att. Loss, and total loss can be measured at the same time.

●Power Meter Method



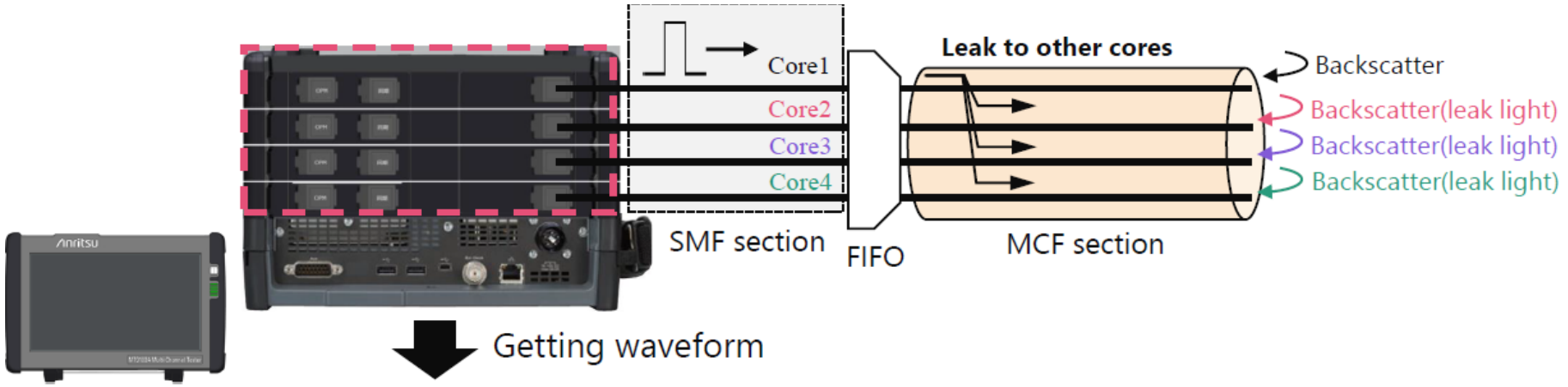
- Need to change connection
- Need power meter at fiber end
- XT and total loss can be measured.

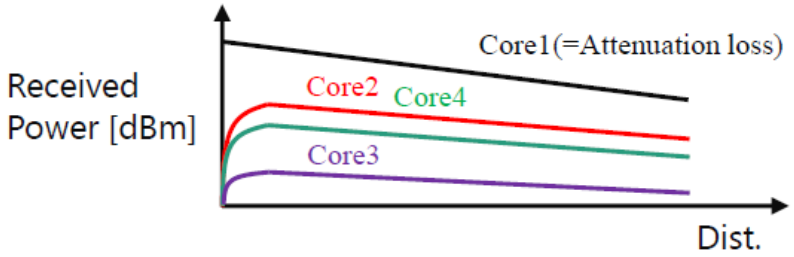
●Loopback Method



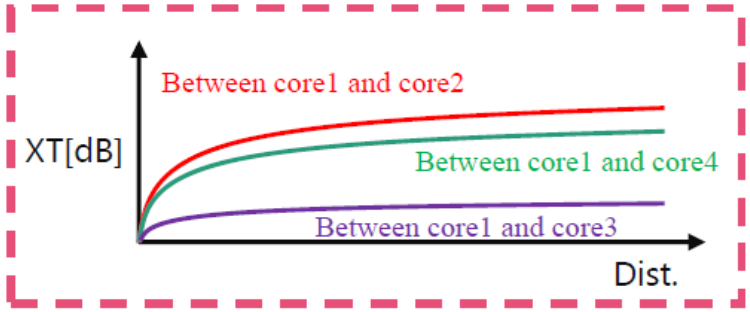
- Need to change connection
- Need dummy fiber at fiber end
- XT, Att.loss, total loss can be measured at the same time.

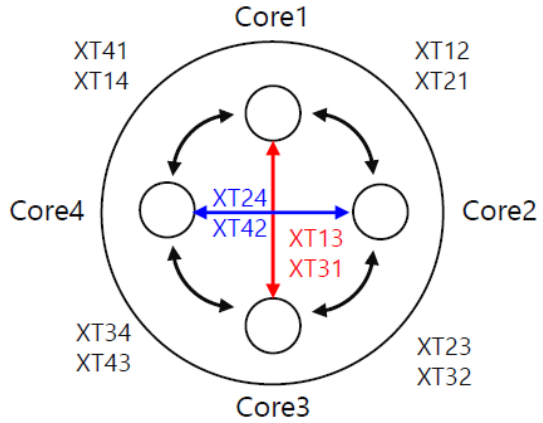
MT9100A Multi Core Fiber channel Characterization and Certification





Analyzing

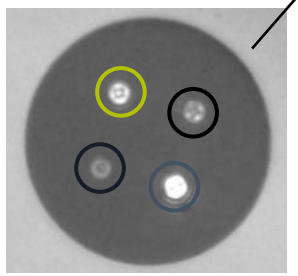




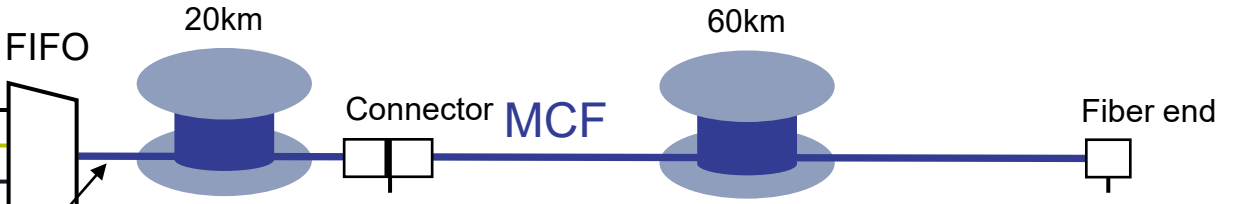
- Fully automated 4 core test
- Traditional OTDR measurements
- Core to core crosstalk measurement

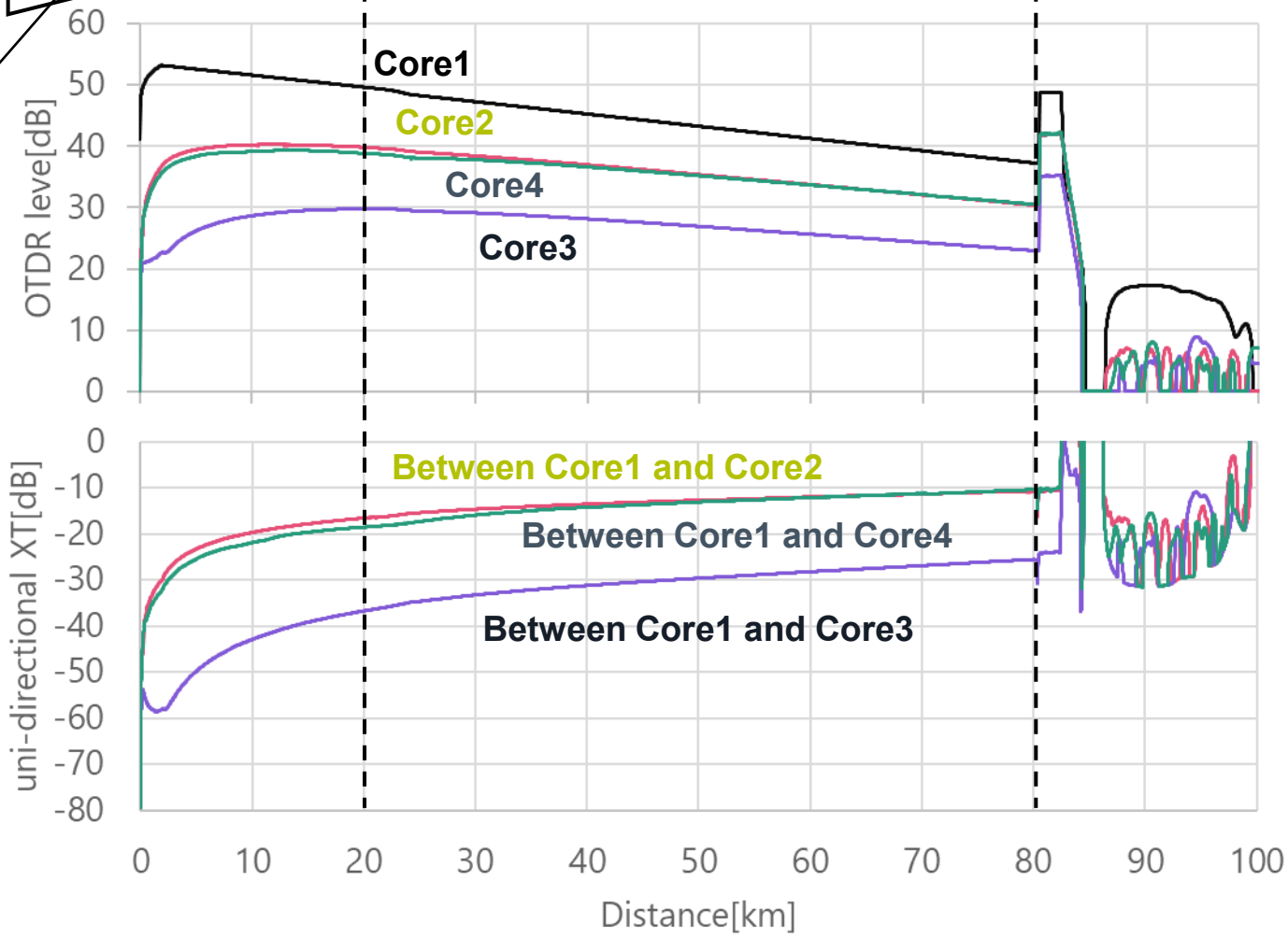
Length, Attenuation, Return Loss	Core 1/2/3/4
Uni-Directional Crosstalk	XT12 / XT13 / XT14 XT21 / XT23 / XT24 XT31 / XT32 / XT34 XT41 / XT42 / XT43

MT9100A Measurement Results



4core MCF

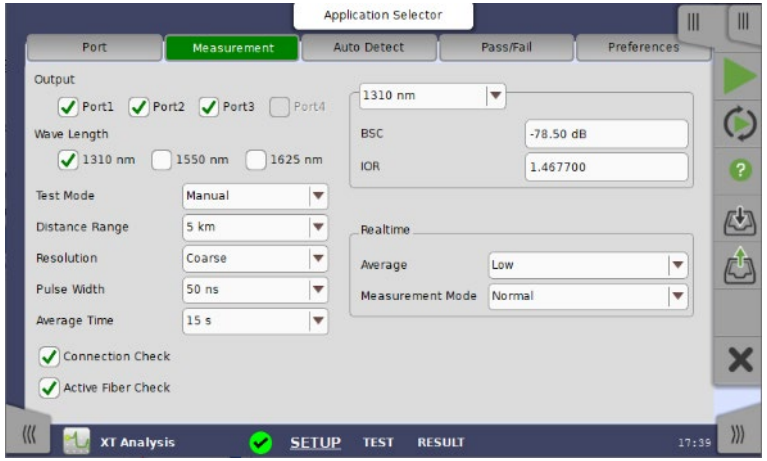




XT is calculated to subtract from core2/3/4 to core1

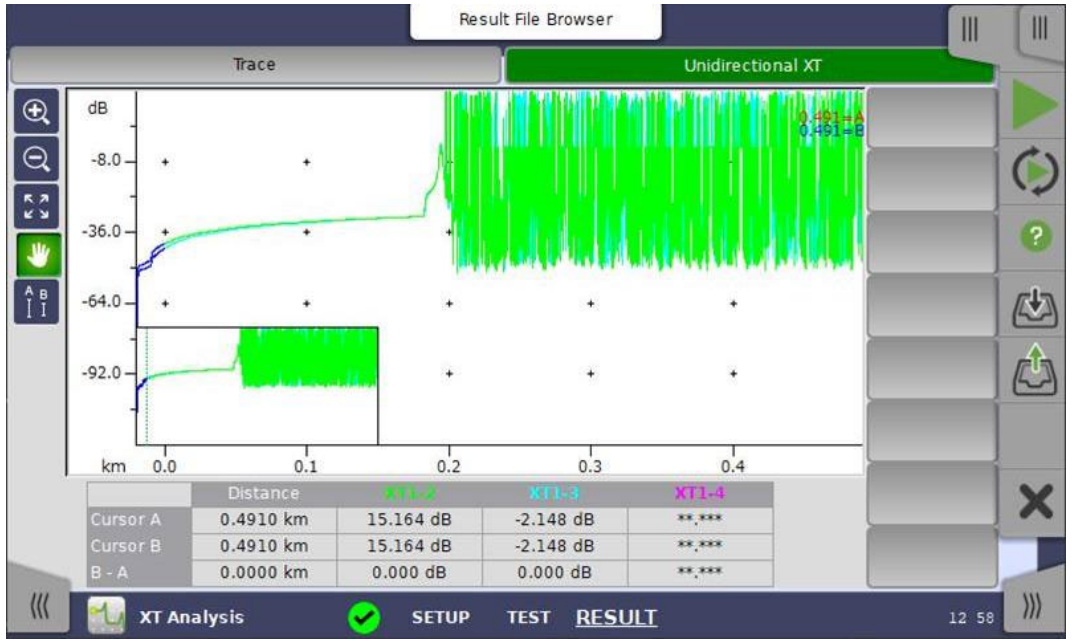
MT9100A Product introduction(3/6)

MT9100A's GUI.



←Measurement setup.

XT measurement result→



If you want to know how to measure XT, please see Appendix

About more detail, we will show that in hands on session

MT9100A Product introduction(6/6)

Here is representative comparison each method.

	MCF-OTDR	OLS/OPM	Loopback OTDR
Accuracy	★★★	★★★	★★
Measurement time	★★★	★	★★
Field measurement	★★★	★	★★
Event measurement	★★★	★	★★
XT distribution	★★★	---	---
System cost	★	★★	★★★

Anritsu's MT9100A is a simple and fast measurement of both fiber link IL/RL and Xtalk distribution

Target Applications

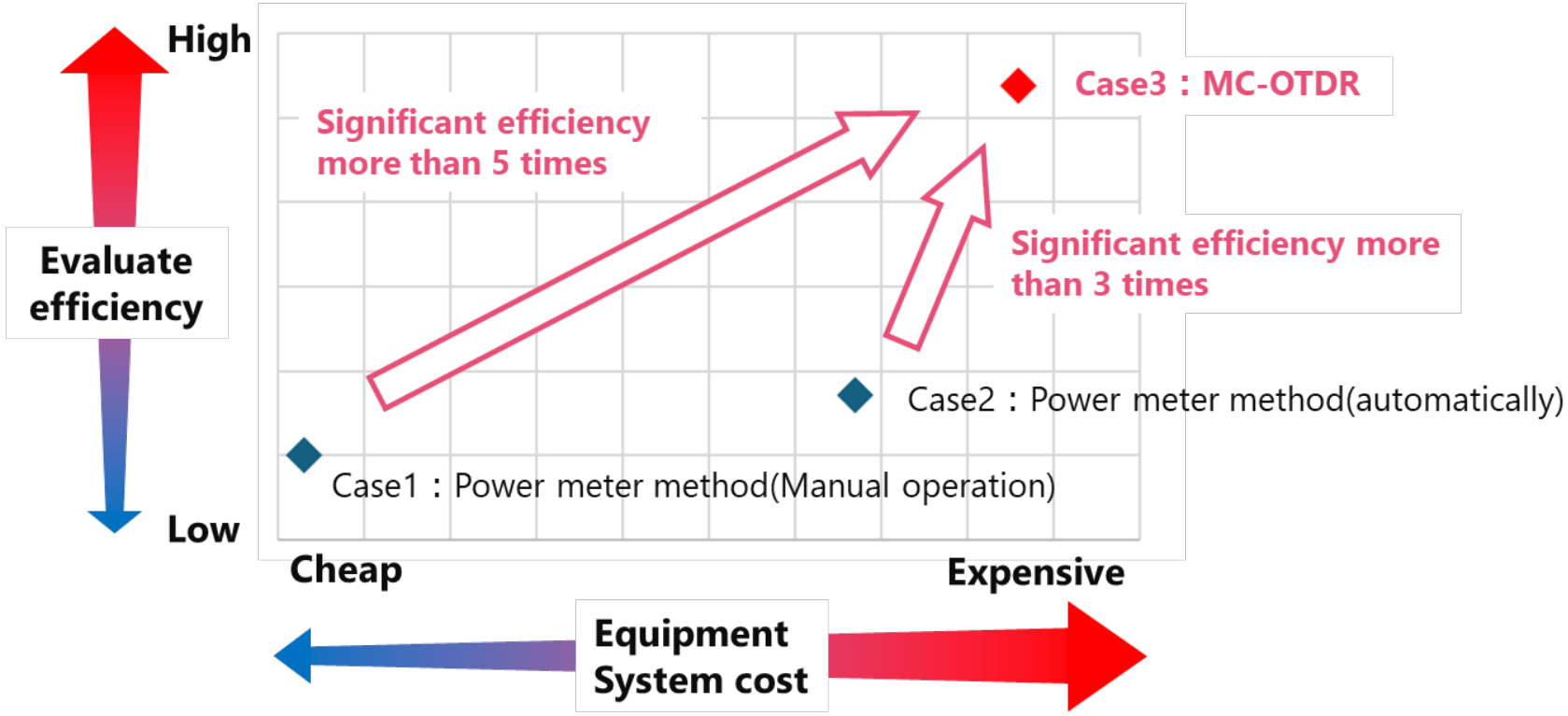
- **Research & Development**
  e.g. Researcher of network operator, research labs. and university.
  Developer of fiber vender
  - ✓ Identification of XT deterioration point.
  - ✓ Could be used at installation test thanks to single end measurement
  - ✓ Possible to hand carrying
- **Fiber manufacturing and cable assemble**
  - ✓ Cost and lead time reduction with high speed measurement
  - ✓ Don’t need to build a test system.

- **Installation / commissioning of the link**
  - ✓ Cost and lead time reduction with high speed measurement
  - ✓ Easy and fast repoting

- **Subsea cable**
  - ✓ Instalation test thanks to single end measurement
  - ✓ Cost reduction with high speed inspection
  - ✓ Possible to hand carrying

Automated OTDR Testing is Faster and Shows Link Performance

About manufacturing, we can mention evaluation efficiency.



Estimation of efficiency at MCF inspection
(the case of XT and attenuation loss measurement in 4core MCF)

✓ significant efficiency benefits

sales@trs-rentelco.com
800.874.7123

The TRS & Anritsu Partnership

Anritsu Rental Partner **with an expansive inventory and a full range of acquisition options:**

- Short and Long-Term, Full-Service Rentals (overnight exchanges available)
  - Minimize user downtime
- Operating Leases
- Sales of NEW equipment through distribution sales
- 0% Financing for New and Certified Pre-Owned Equipment

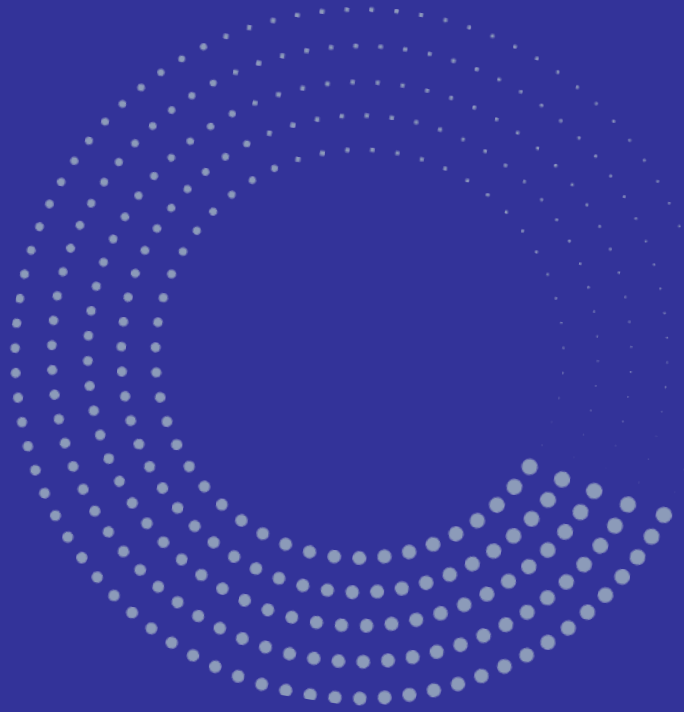
sales@trs-rentelco.com
800.874.7123

The TRS & Anritsu Partnership

Anritsu Rental Partner **with an expansive inventory and a full range of acquisition options:**

- Short and Long-Term, Full-Service Rentals (overnight exchanges available)
  - Minimize user downtime
- Operating Leases
- Sales of NEW equipment through distribution sales
- 0% Financing for New and Certified Pre-Owned Equipment

Questions?



Anritsu
Advancing beyond

TRS RenTelco℠

TRS RenTelco℠

Thank you.

800-874-7123

©2020 McGrath RentCorp, Inc. All rights reserved.