VictoriaSTM-N/OC-M

Universal, Compact, User-Friendly

SDH/SONET

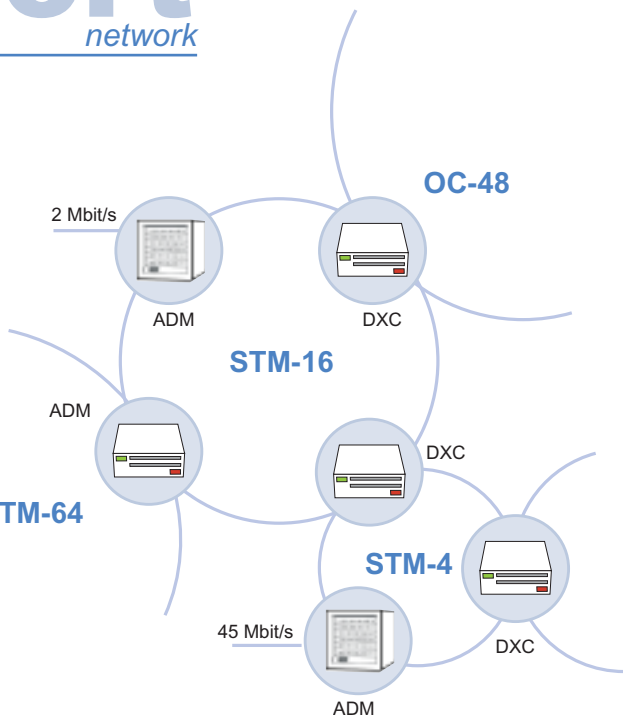
PDH, T-Carrier, ATM and IP

TrendCommunications

Global Transport
network

The interconnection between technological cultures, the impact of new applications and the widespread use of DWDM encourage integration of heterogeneous networks that offer new global high-capacity services. In this situation, testing has become even more critical than before.

Victoria is a hand-held tester for analysing SDH, SONET, PDH and T-Carrier networks and equipment, and it is Trend's answer to the needs of service providers, operators and technicians around the world.



VictoriaSTM-N/OC-M

Universal in Hierarchies, Interfaces and Performance

SDH/SONET Features

- Universal interfaces for SDH, PDH, SONET and T-Carrier up to 2.5 Gbit
- Advanced remote control with GUI
- Path trace in J0, J1 and J2
- G.821, G.826, G.828, G.829, M.2100, M.2101, M.2110* and M.2120* performance
- Tandem Connection Monitoring (TCM) and APid tests
- G.783 pointer sequences
- TIE and frequency measurements
- Event insertion/analysis for all interfaces and frames
- Line frequency offset generation
- All the SDH, SONET, PDH and T-Carrier interfaces in one tester; no extra modules needed
- VC-4-4c and STS-12c SPE VC-4-16c and STS-48c SPE

IP Features

- IP ping over ATM
- List of most frequently used IP addresses
- Bandwidth use (bit/s)
- Traffic composition by protocol: TCP, UDP, ICMP, IGMP
- Traffic composition by application: WWW, FTP, Telnet, DNS, SMTP

ATM Features

- Tests at 2, 34, 45 and 155 Mbit/s
- ATM traffic generation with editing of overheads and payload
- Traceability of 1024 active connections
- ATM, CBER Bit Error tests
- Simultaneous analysis of CTD,
- 1-CDV, 2-CDV, CMR, CLR, CER, SECBR, SES and US
- End-to-end or segment F4/F5 cells
- AIS, RDI, continuity test and closed loop
- Graphical results, and results by containers
- Cell capture function
- Generation and analysis of AAL-1
- AAL-2 with generation and analysis of the CPS, SSSAR and SSETD sublayers
- Generation and analysis of AAL-5

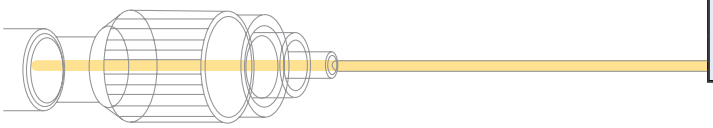
* Only available for some models. For more information, please contact Trend Communications.

SDH, SONET, PDH

and T-Carrier, All-in-One Solution

Independently of the standard, rate or interface, Victoria is a tester that meets all your test and measurement needs.

- All the SDH and SONET interfaces up to STM-16/OC-48
- STM-0 at 52 Mbit/s
- SDH at 34 Mbit/s (ITU-T G.832)
- All the PDH interfaces, as well as T-Carrier DS1 and DS3
- *n* x 64 and n x 56 tests and signalling at E1 and DS1 interfaces



SDH	SONET	PDH	T-Carrier	ATM
STM-16	OC-48	E4	DS3	E1
STM-4	OC-12	E3	*n* x 56 kbit/s	E3
STM-1	OC-3	E2	*n* x 64 kbit/s	DS3
STM-0	STS3-3c	*n* x 64 kbit/s		
	STS-1			

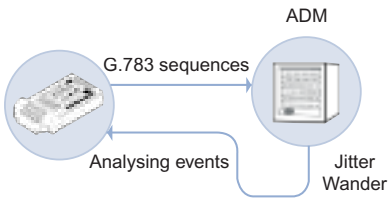
Installation

and Bringing-into-Service

Generating G.783 Sequences

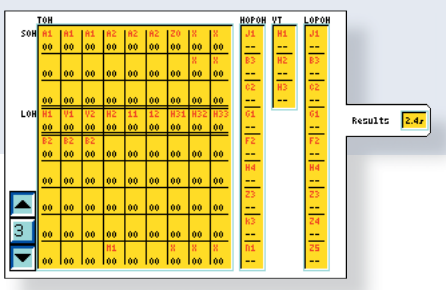
One of the main causes of error in SDH and SONET are the phase impairments (jitter) caused by pointer adjustments.

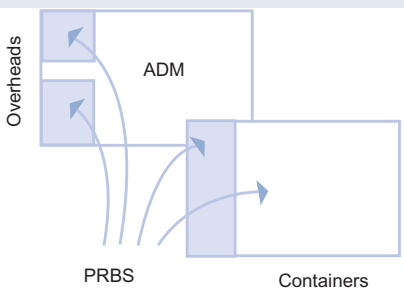
With Victoria you can generate pointer movement sequences (ITU-T G.783) to simulate real situations and perform stress tests on network elements.



- Up to two 1550 and 1310 nm transmitters
- All the FC/PC, SC, ST and connectors
- One connector for all electrical interfaces
- Automatic disconnection of the optical receiver to avoid permanent damage

- Transparency tests over DCCs and other overhead bytes
- BER in VC-4-4c (STS-12c SPE) and VC-4-16c (STS-48c SPE) concatenated containers





Overhead (OH) and Container (VC) Tests

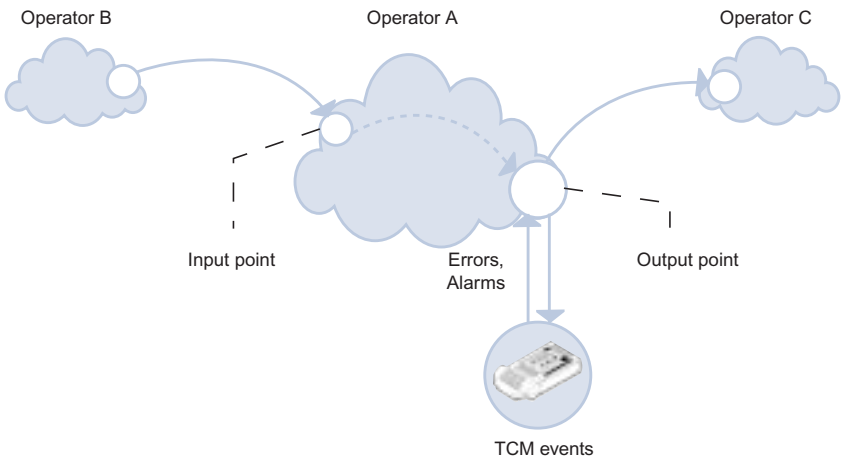
Victoria makes it easy to access all the overheads of frames and containers, enabling you to program and analyse them. You can also carry out automatic or programmable BER tests with test patterns in all the containers and overhead bytes.

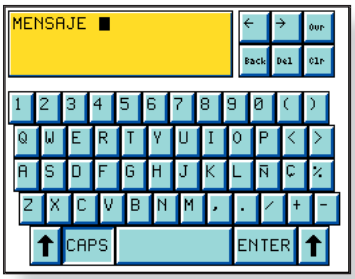
Maintenance
and Monitoring

Tandem Connection Monitoring (TCM)

There is an increasing amount of services and applications making use of interconnected networks that have complex relationships of collaboration and competition.

In this environment, the mechanisms that Victoria offers to detect alarms and errors are essential, and they can be used to determine the responsibility of each operator.





Keyboard for results, file names and comments

- Time graphs and histograms for errors, alarms and pointer events
- Virtually unlimited capacity to register events
- Memory-storable graphs
- Search, identification and quantifying functions

- Generating and analysing N1 and N2 bytes
- Detecting, storing and analysing TCM events

Automatic Protection Switching (APS)

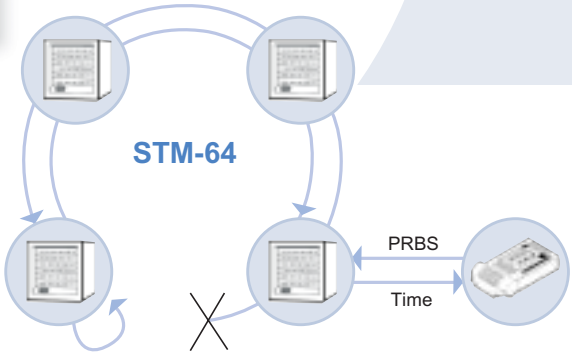
SDH and SONET networks tolerate errors where the APS protocol defines the protection strategy.

Victoria evaluates the performance of the APS mechanism that is in charge of re-establishing the service in case of failure.

Registering and Tracing Events

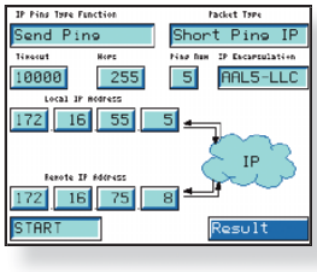
Tracing is the most powerful analysing tool in a tester, if it has, like Victoria, an unlimited capacity of registry, instant printing, filtering, search and quantifying functions for all events.

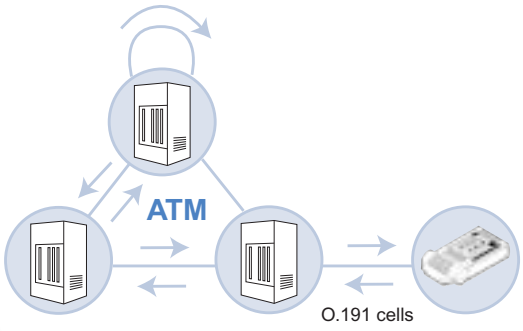
With Victoria you can also easily save and transfer your results onto a PC.

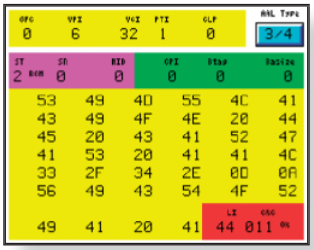


ATM

Guaranteed Performance and Service







Optimising the ATM Network

Victoria is truly powerful when performing various measurements simultaneously, for example monitoring errors while measuring Quality of Service (QoS) and analysing Operation, Administration and Maintenance (OAM).

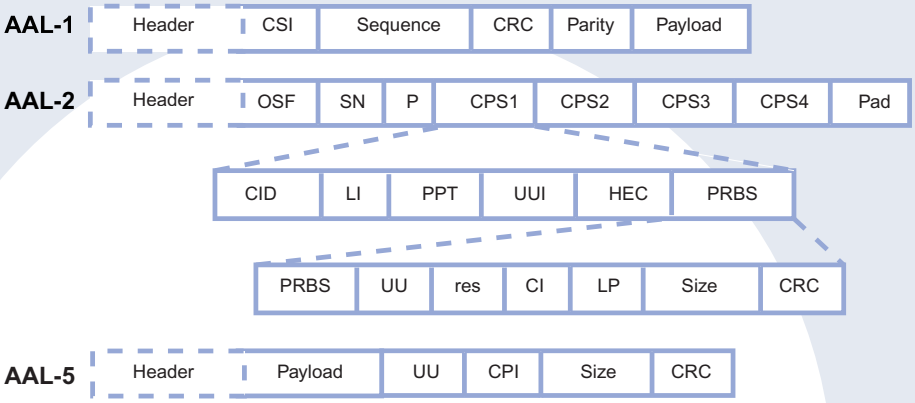
ATM layer measurement results, including physical layer use, are represented as numeric tables and time graphs, which is very useful when analysing the results.

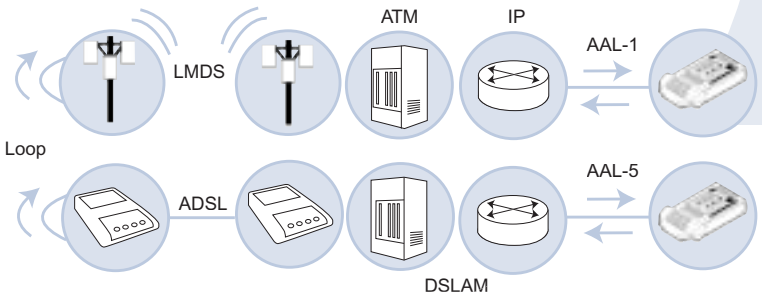
The Solution for UMTS/3G Networks

ATM technology is used in 3G mobile networks and UMTS networks, mainly in fixed access infrastructure.

The 3G Partnership Project (3GPP) defines a wide range of protocols between end users and networks, residing above ATM Adaptation Layers 2 and 5 (AAL-2 and AAL-5).

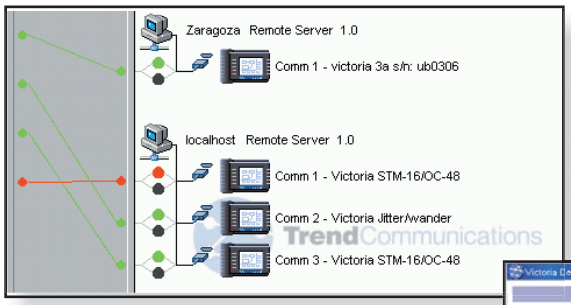
AAL testing makes Victoria suitable for ADSL and LMDS applications as well.



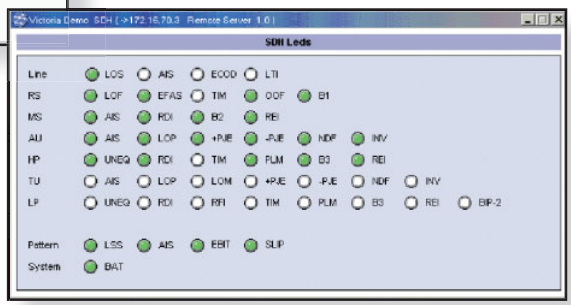


Remote Control

from Anywhere, Any time

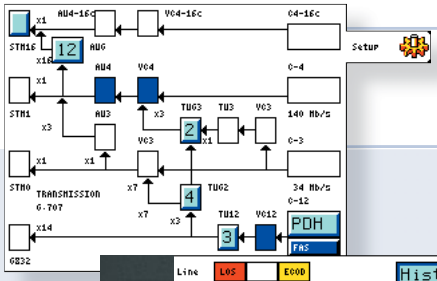


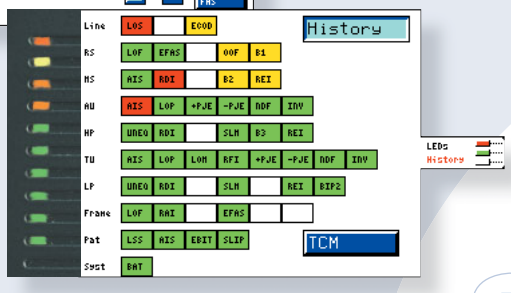
Technicians do not need to make unnecessary trips any more: the network of testers is accessible from anywhere in the world. With Victoria, users in different locations can easily compare results obtained by various testers connected to the Internet.

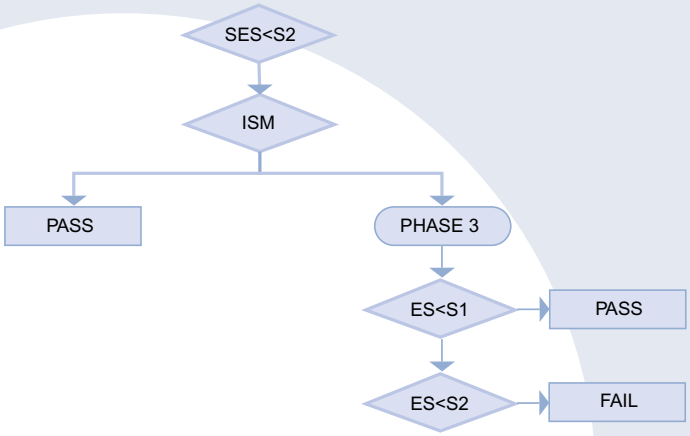


Manageable

Power







Executing macros

Functions

Macros enable automatic, preprogrammed measurements with one single key press. The Autoconfiguration detects the whole signal structure, and the Fast Scan explores alarms and errors in synchronous tributaries.

Touch&Play©

The simple structure and the touch screen offer you the most natural and efficient user interface in the market.

Light and Autonomous

Its small size, light weight and autonomy make Victoria a handy tester for both field and factory work, where efficiency is a keyword.

Easy-to-Clean Optical Connectors

Optical interfaces can easily get dirty in dusty environments. However, keeping them clean is essential to avoid errors or loss of signal. Victoria's removable optical connectors are easy to clean or replace.

Soft LEDs©

Up to 100 events can be displayed simultaneously, with 10 tricolour on-screen LEDs.

Modes

Victoria operates in termination, transparent and mux/demux modes, in or out of service, in all the interfaces.

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Distributor

To arrange a demonstration or to obtain the latest information on the Trend **Victoria** or any of Trend's other test equipment, contact your nearest Trend Distributor.

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