

CASE COMMUNICATIONS

Company Profile

&

Product Overview

albremb
BEYOND INNOVATION

Authorized dealer





Case Communications History

- **British Company Founded in the 1970s**
(Computer & Systems Engineering (Case) Dowty-Case, Cray, Case Technology)

Case Communications – 2000 onwards - Engineering biased

- **WAN Division new products – new markets**
- **Specialists in Industrial / Rugged Communications**
- **Strong focus on support- we like solving problems**
- **Long term relationships with customers**
- **VARs providing support overseas**



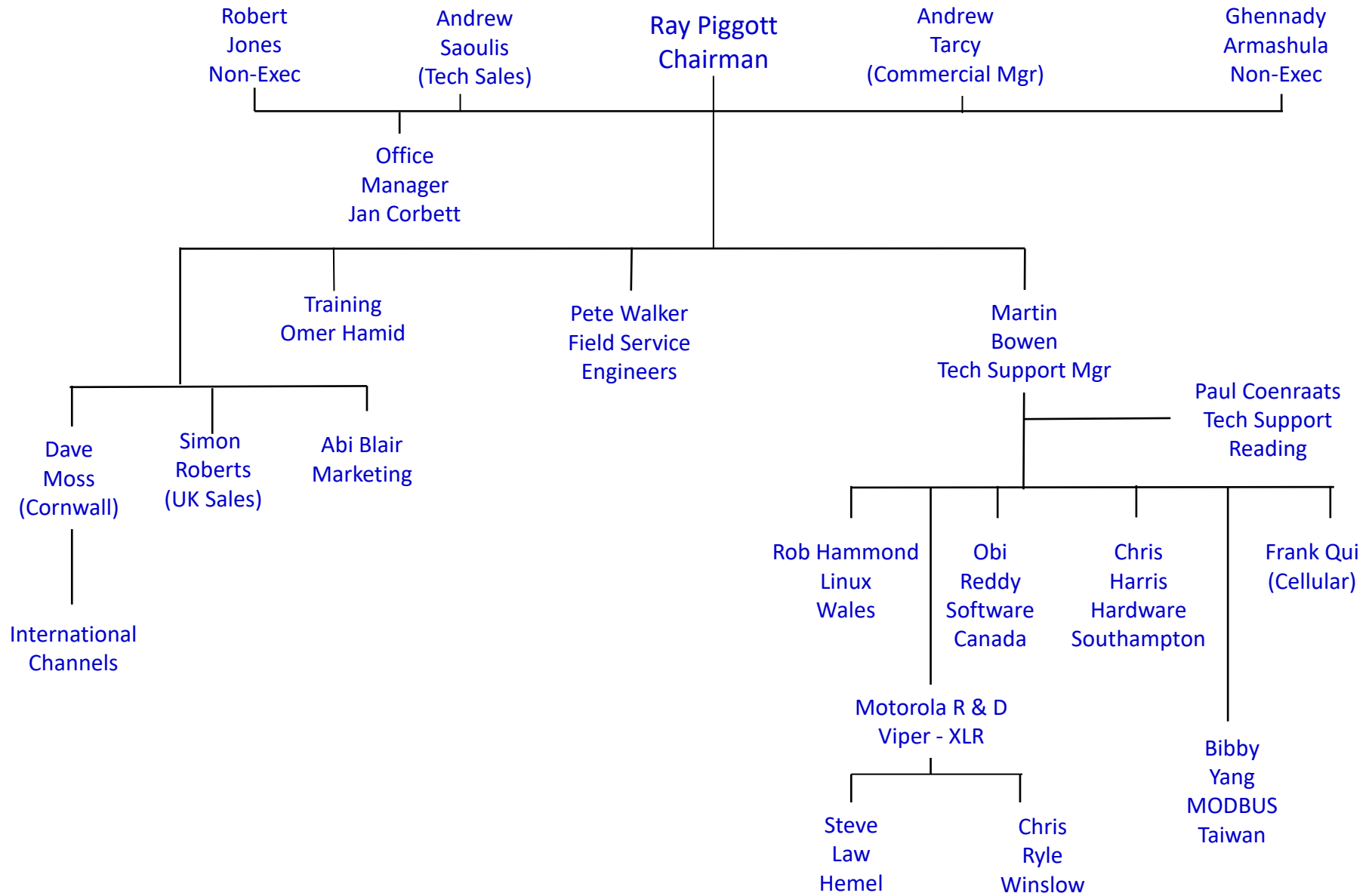


Case Communications International Partners



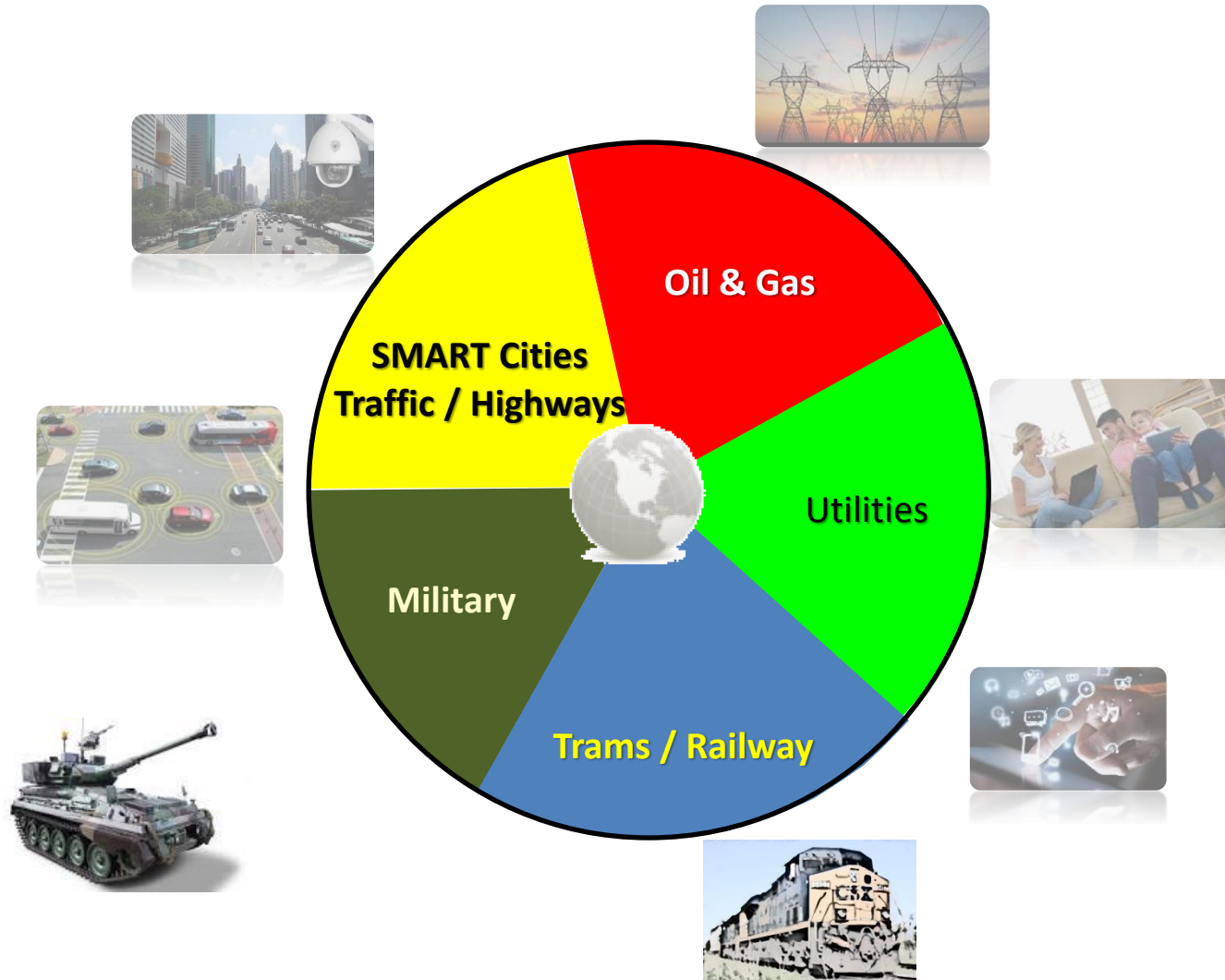
R & D - England, Canada & Taiwan
 Manufacturing United Kingdom & Taiwan
 International support via partners

Case Communications Structure





Case Communications Markets





Why Case Communications ?

- High levels of support
- Remote Monitoring
- Free Software Upgrades
- Adaptability
- Cost effective



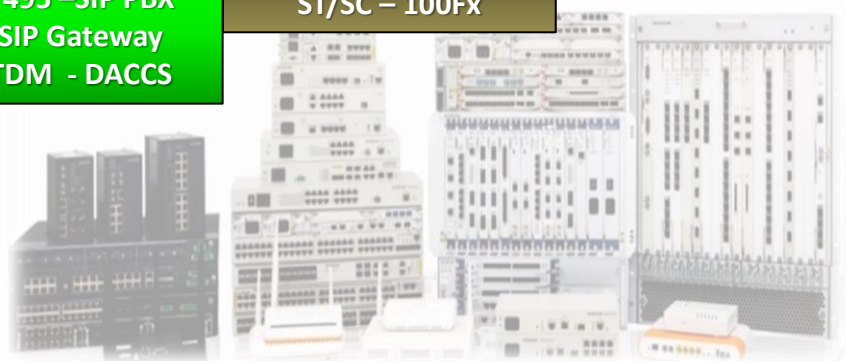
Case Products



Products and Technologies

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CaseView SNMP Network Management System

Industrial Routers	Industrial Ethernet Switches	Voice Over IP	Media-Conv	WiMax
6401 ADSL 2+, 4 x 10/100	PIFE 8T 2GB G 8 x Tx PoE, 2 x Gig SFP	Viper Bri / Pri ISDN, FXS / FXO, E&M	Gigabit 2 x SFP 2 x TXPoE/PoE+	Point to Point Meshed
6540 Fibre/V.DSL/ADSL2+ 2 x Gig MINI GBIC 4 x Tx PoE, Multicast PoEOption, 4G Backup	PIGE 8T4S G 8 x Tx, 4 x Gig SFP	7495 –SIP PBX SIP Gateway TDM - DACCS	ST/SC – 100Fx	
6402 ADSL2+-Dual 4G/LTE 4 x Tx, Wi-Fi, MODBUS	IFE 16T 4GB 16 x Tx, 4 x G SFP			
6944 Dual SIM 4G Router 4 x Tx,Wi-Fi, MODBUS	PIXE-12T-4SX-G 12x Tx PoE, 4 x 10G SFP			
8256 VPN Concentrator	R2 24TxP-4S-G 4 x 1GSFP – 24 TXP PoE			
	R3 24TxP 8S-4X-G 24Tx-8 x SFP, 4x10GSFP			
	R3 8TxP-24S-4X-G 8 x Tx, 24 x SFP, 4 x 10GSFP			
SFP				Industrial Patch Panels
Base Repair	Monitoring & 2 nd Line Support			Internet Services
Legacy Products				
X.25				
Statistical Muxes				

Industrial Routers

Model	6401	6402	6540	6944	8256 VPN Concentrator
					
WAN Ports	ADSL 2+	ADSL2+ Dual LTE 4G/3G Cellular	2xGig SFP, V.DSL / ADSL2+	1 x Eth WAN	5 x Gigabit Ethernet
Access Ports	4 x 10/100	4 x 10/100	4 x 10/100 PoE 2 x 10/100/1000	3 x 10/100Mbps	Ethernet Only
Cellular	None	Dual 4G Cellular Load Share	Optional 4G	Dual 4G Cellular	None
Wi-Fi	None	802.11b/g/n	Future Option	802.11b/g/n	None
Watchdog	HW & SW	HW & SW	HW & SW	HW & SW	HW
Serial Port	None	RS232 / 485 (MODBUS)	Future 232/485 Future MODBUS	RS232 / 485 (MODBUS)	None
Resilience	PPP Health check Routing	Dual SIM Cellular back-up VRRP	PPP Health check Phase 2 VRRP dual cellular back up	DUAL SIM, Wi-Fi, VRRP, Ethernet WAN	VRRP
Installation	Rack / Desk mount	DIN Rail / Desk	DIN Rail / rackmount	DIN Rail / Desk	Desktop
Operat Temp	-20C ~ +75C	-20C ~ +60C	-40C ~ +75C	-40C ~ +75C	0C ~ +50C
Power Input	9vdc ~ 72vdc	9vdc ~ 48vdc	14vdc ~ 72vdc	+9vdc ~ +48vdc	12vdc / 2A
Management	CLI / Web Gui , SNMP	CLI / Web Gui , SNMP TR069	CLI / Web Gui , SNMP TR069	CLI / Web Gui , SNMP TR069	SNMP -v3, Web, CLI



Voice Over IP Products

Model	Viper Largely sold to Network Rail	7495 – SIP PBX, VoiP Router, Gateway Designed for use in Rail
		
WAN Ports	1 x ISDN + Dual X.21, E1	4 x E1 Pri ISDN per chassis
Access Ports	FXS / FXO, Bri, Pri, AC15, E&M, Serial	Up to 32 Analogue ports per 1U Chassis
Cellular	None	12 channel GSM Gateway
Wi-Fi	None	None
Watchdog	HW	HW
Voice Algorithms	G.711, G.726, G.729A	G.711, G.726, G.729a b, G.723.1. T.38 SIP 3261, RFC 2327 (SDP)
WAN Services	ISDN, E1, PPP, ML-PPP, Frame Relay	R1, ISDN, Frame Relay
Serial Port	RS232 / X21. HDLC Over IP	RS232 Console Port
Resilience	MLPPP, ISDN Back up, RipV1/V2	Multiple cards in 16 slot chassis
Installation	Desktop	Rackmount / desktop
Operating Temp	0C ~ +50C	0C ~ +55C
Power Input	230vac / 48vdc	85VAC ~ 260VAC or 48vdc
Management	SNMP - Menu	SNMPv2c / HTTP, HTTPS, FTP, TFTP, SSH, CLI



Industrial Switches

Model	PIXE 12T 4SX G 4 x 10Gbps 12 x 10/100/1000	PIGE 8T 4S MX 4 x 1Gbps 8 x 10/100/1000	PIGE 4T 2S-G 2 X 1Gbps 4 x 10/100/1000	IFE 6T UM 6 x 10/100 Unmanaged
				
TX Ports	12x 10/100/1000	8 x 10/100/1000 PoE	4 x 10/100 /1000 PoE	6 x 10/100
Fibre	4 x 1000/10000	4 x 100/1000 SFP	2 x 100 / 1000 SFP	None
PoE / PoE+	8 Ports PoE, 4 x Non PoE	8 Ports	4 Ports (Option bt)	None
Backplane	120 Gbps	24 Gbps	24Gbps	1.6Gbps
Resilience	G8032, MSTP, RSTP, STP	Ring, MSTP, RSTP, STP	G.8032, MSTP, RSTP, STP	IP40
Storm Control	Loop / root Guard	B/Cast, Unknown Multicast, DoS	Multiple Broadcast / Multicast / DLF	Not Applicable
Housing	IP 40	IP 30	IP 40	IP 40
Operating Temp	-40C ~ +75C	-40C ~ +75C	-40C ~ +75C	-40C ~ +75C
Power Input	Dual 46vdc ~ 57vdc	Dual 24 vdc ~ 48vdc	Dual 48vdc ~ 55Vdc	Dual 12 ~ 48vdc
Consumption	Switch 18 watts at 48vdc Max PoE – 240W 48vdc	Switch 15 watts at 48vdc Max PoE – 240W 48vdc	Switch 7 watts at 24vcd Max PoE – 120W 48vdc	Switch 4W Standby 5W Full load
Dimensions (mm)	165 (h) x 148 (d) x 54(w)	74(w)c 152(h) x 105(d)	145x 125 x 40mm	119mm x 100mmx 30mm



Industrial Rackmount Switches

Model	R2 24TxP-4S-G Layer 2 4 x 1Gbps SFP 24 x 10/100/1000	R3 24TxP-8S-4X-G Layer 3 4 x 10Gbps 24 x 10/100/1000 TXP 8 x 1Gbps SFP	R3 8TxP 24S-4X-G Layer 3 4 x 10Gbps 24 x 1Gbps SFP 8 x 10/100/1000TxP
			
TX Ports	24x 10/100/1000	24 x 10/100/1000 PoE	8 x 10/100/1000
Fibre	4 x 1000/10000	4 x 1 / 10Gbps SFP 8 x 100/1000 SFP	4 x 1 / 10Gbps SFP 24 x 100/1000 SFP
PoE / PoE+	24 x 10/100/1000	24 x 10/100/1000	8 x PoE
Backplane	256Gbps	598 Gbps	596Gbps
Resilience	G8032, MSTP, RSTP, STP	Ring, MSTP, RSTP, STP	Ring, RSTP, STP
Storm Control	B/Cast, Unknown Multicast, DoS	B/Cast, Unknown Multicast, DoS	B/Cast, Unknown Multicast, DoS
Housing	IP 30	IP 40	IP 40
Operating Temp	-40C ~ +75C	-40C ~ +75C	-40C ~ +75C
Power Input	Dual DC 12-48v, AC 100~240	Dual DC 12-48v AC 100~240	Dual DC 12-48v AC 100~240
Consumption	Switch 22W Max PoE – 600W 48vdc	Switch 22 watts at 48vdc Max PoE – 600W 48vdc	Switch 25 watts at 48vdc Max PoE 250 watts
Dimensions (mm)	440x 298x44.5mm	440x 298x44.5mm	440x 298x44.5mm

Media Converters

Model	IMC 100 MM ST	IMC GB SFP	IMC GB 2SFP	PIMC 2GB 2SFP PoE on 2 ports
				
Fibre Ports	1 x 100FX MM ST	1 x Gigabit SFP	1 x Gigabit SFP	2 x Gigabit SFP
TX Ports	1 x 10/100Tx	1 x 10/100/1000Tx	2 x 10/100/1000Tx	2 x 10/100/1000Tx
PoE / PoE+	None	None	None	2 x PoE / PoE Plus
Technology	Store and Forward	Store and Forward	Store and Forward	Store and Forward
Auto-Negotiate	Speed Full Half duplex	Speed Full /Half duplex	Speed Full /Half duplex	Speed Full /Half duplex
Network resilience	Link Pass / Through	Link Pass / Through	Link Pass / Through	Re-route via 2 nd SFP
Hardware resilience	Redundant PSU	Single PSU	Redundant PSU	Redundant PSU
MDI / MDI-X	MDI / MDI-X	MDI / MDI-X	MDI / MDI-X	MDI / MDI-X
Housing	IP 30 DIN Rail	IP40 DIN rail	IP40 DIN rail	IP40 DIN rail
Operating Temp	-40C ~ +75C	-40C ~ +75C	-40C ~ +75C	-40C ~ +75C
Power Input	DC 48v ~ 57vdc	DC 24v (12v ~ 48 Vdc)	DC 24v (18vdc ~ 36vdc)	DC -48Vdc
Consumption	2.74 watts max	1.8 Watts Max	5 Watts at 24vdc	5 Watts + POE
Dimensions (mm)	30 (w) x 140(h) x 95(d)	35(w) x 100(h) x 95(d)	60.5(w) x 140(h) x 118(d)	31(w) x 148(h) x 120(d)

WiMax Solutions

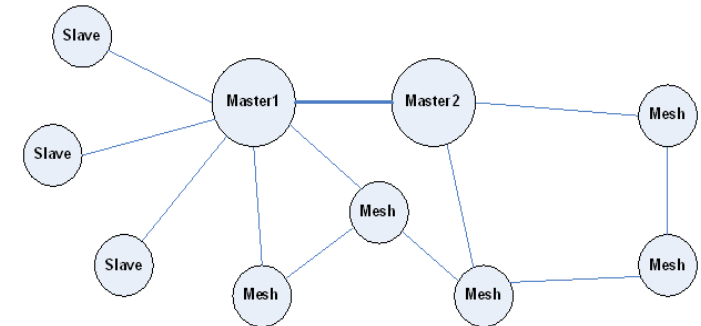
- Infilink Point to Point



- Infiman – Point to Multipoint



- 2 x 2 PRO - high performance series
- 2 x 2 LITE - cost-effective medium capacity series



Performance Benefits

- Up to 750Mbps short distance, 300Mbps medium distance, 200Mbps+ 30km and above
- 2Gbps systems also available
- 200+ Mbps links at the distances of 30 km and above
- High-gain integrated antenna units suitable for 50+ km hops
- Sophisticated automatic modulation and Tx power control algorithms

DIN Rail Mounted Industrial Patch Panels



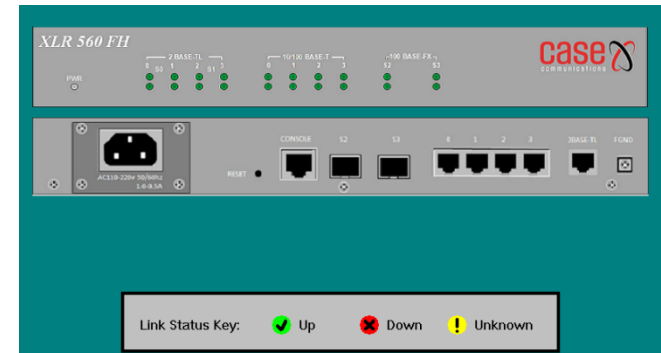
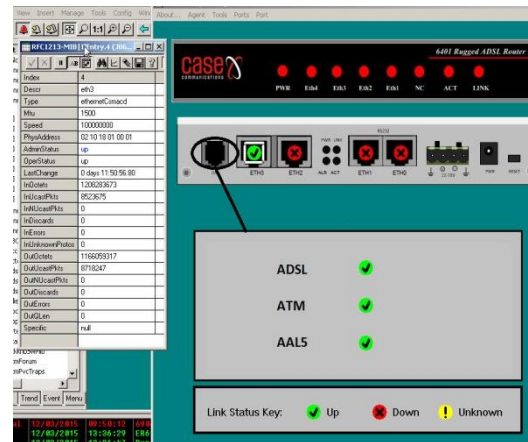
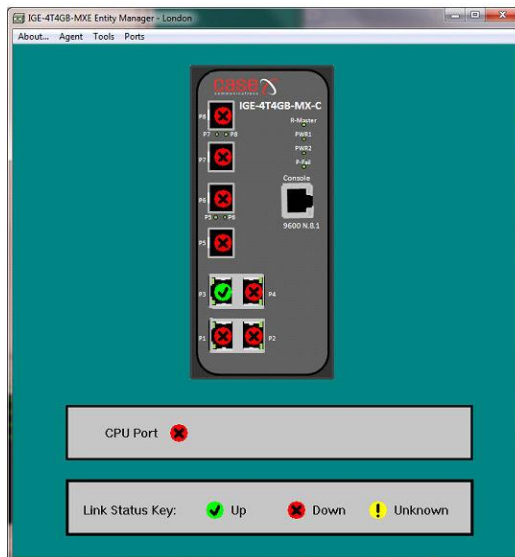
- Fibre Optic DIN Rail mounted patch panel
- Up to 48 Way – 4 cassettes (each with 12 fibre pairs)
- Range of connectors – e.g. LC, SC etc.
- All Metal construction



Network Management

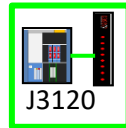
CaseView SNMP Network Management

- Manages Case Communications and 3rd party products
- Graphical display with zoom facility
- Pro-active and Reactive fault monitoring
- Simple click to connect to products
- Inventory management
- Statistics and performance data
- Up and downloading of device configuration



CaseView Network Management

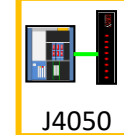
**Circuit
Healthy**



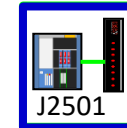
J3120



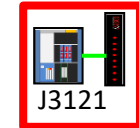
J4030



J4050



J2501



J3121

**Circuit
Failed**

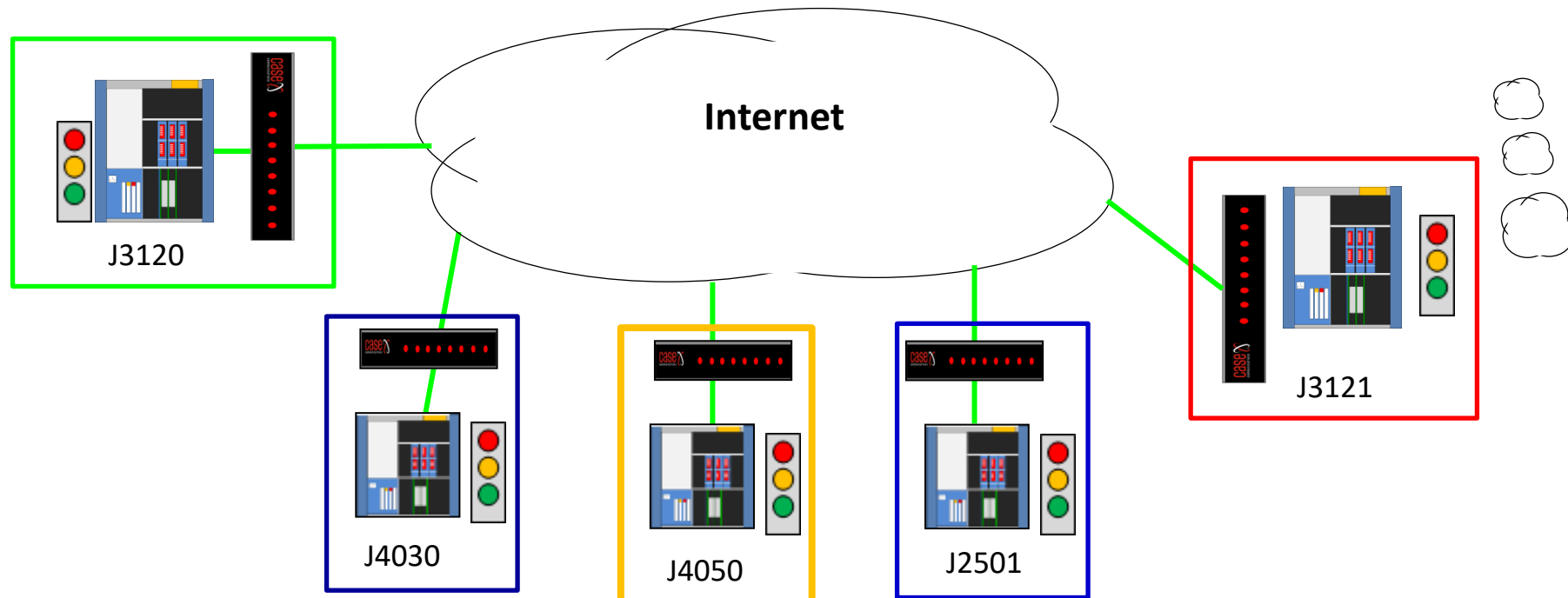
J3120
No Problems
15.10
10.7.18

J4030
Cable Unplugged
14.30
10.7.18

J4050
Minor Problem
15.00
26.10.2018

J2501
Power reset
03.10
12.7.2018

J3121
Alarm O.T.U
15.25
11.7.2018



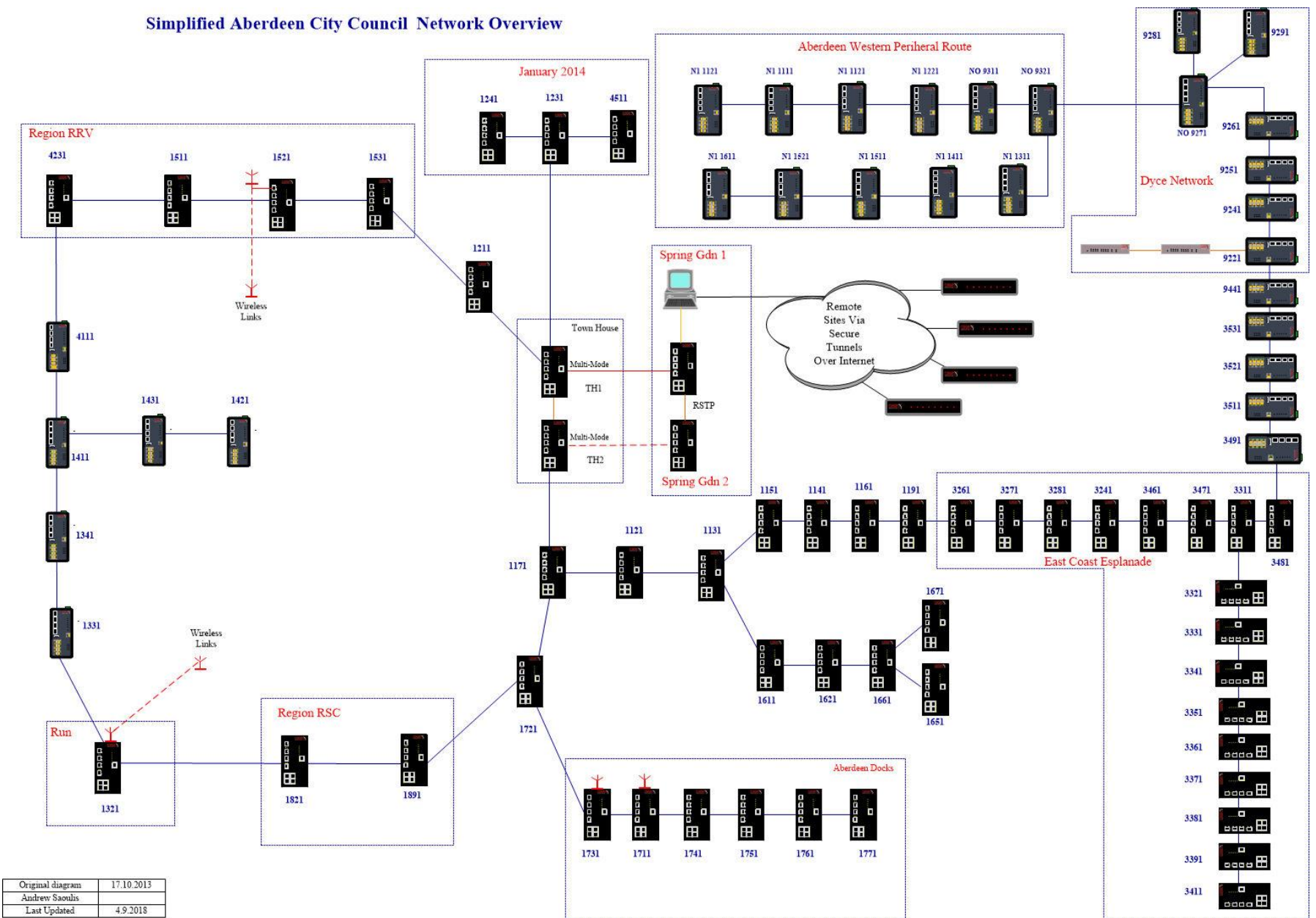


Sample Networks



Aberdeen City Council – Switches – Routers – Extenders Network Management

Simplified Aberdeen City Council Network Overview

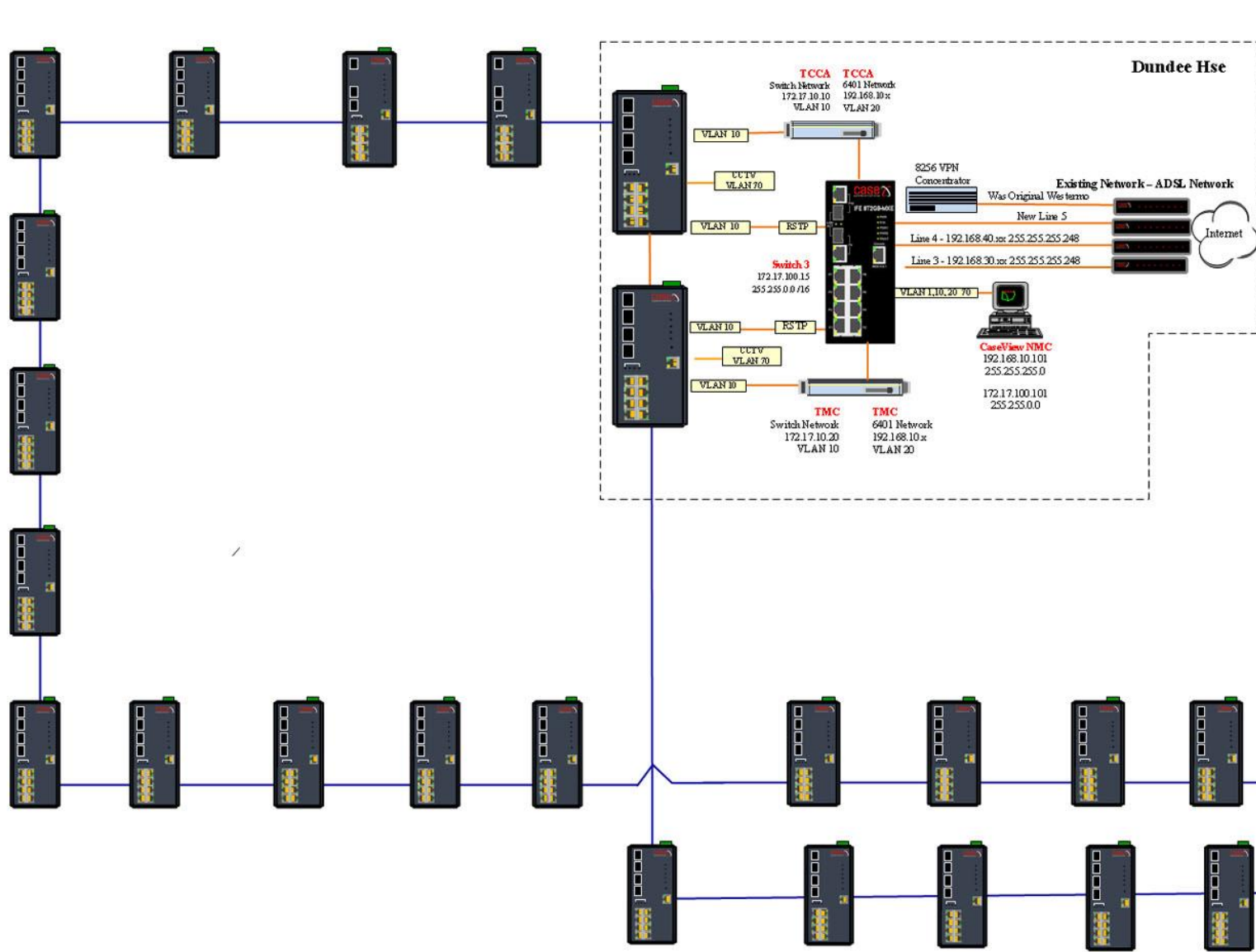


Original diagram	17.10.2013
Andrew Saoulis	
Last Updated	4.9.2018

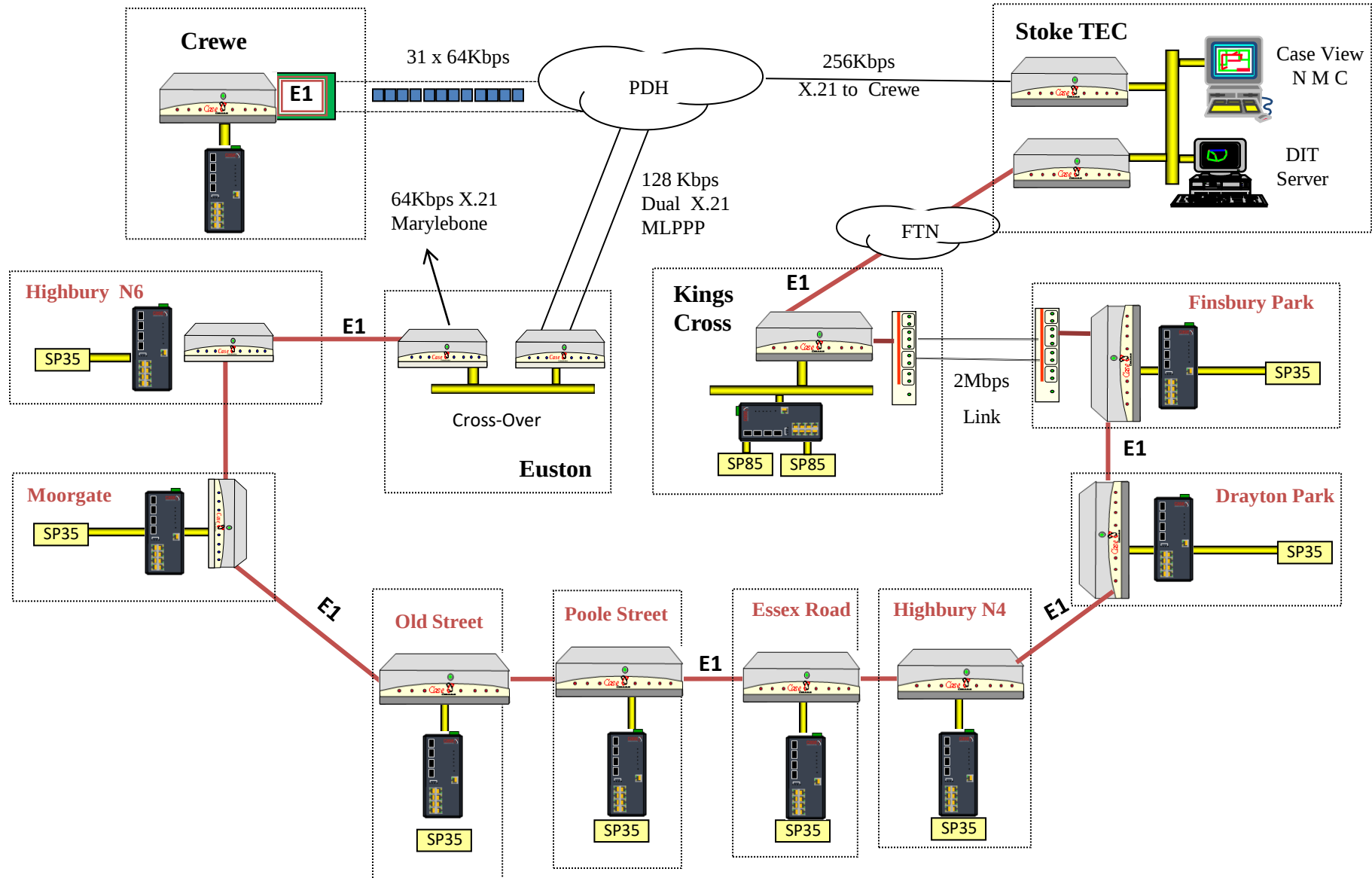
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[illegible]

The diagram illustrates a 2x5 mesh network topology. It consists of 10 nodes arranged in two horizontal rows of five. Each node is represented by a black rectangular icon with a green top edge, a red bottom edge, and a yellow front panel featuring four ports and a small display. The nodes are interconnected by blue lines forming a grid: five horizontal lines connect the nodes within each row, and five vertical lines connect the nodes between the two rows. This configuration results in each node having four neighbors (two horizontally and two vertically), except for the nodes at the corners and edges which have fewer neighbors.

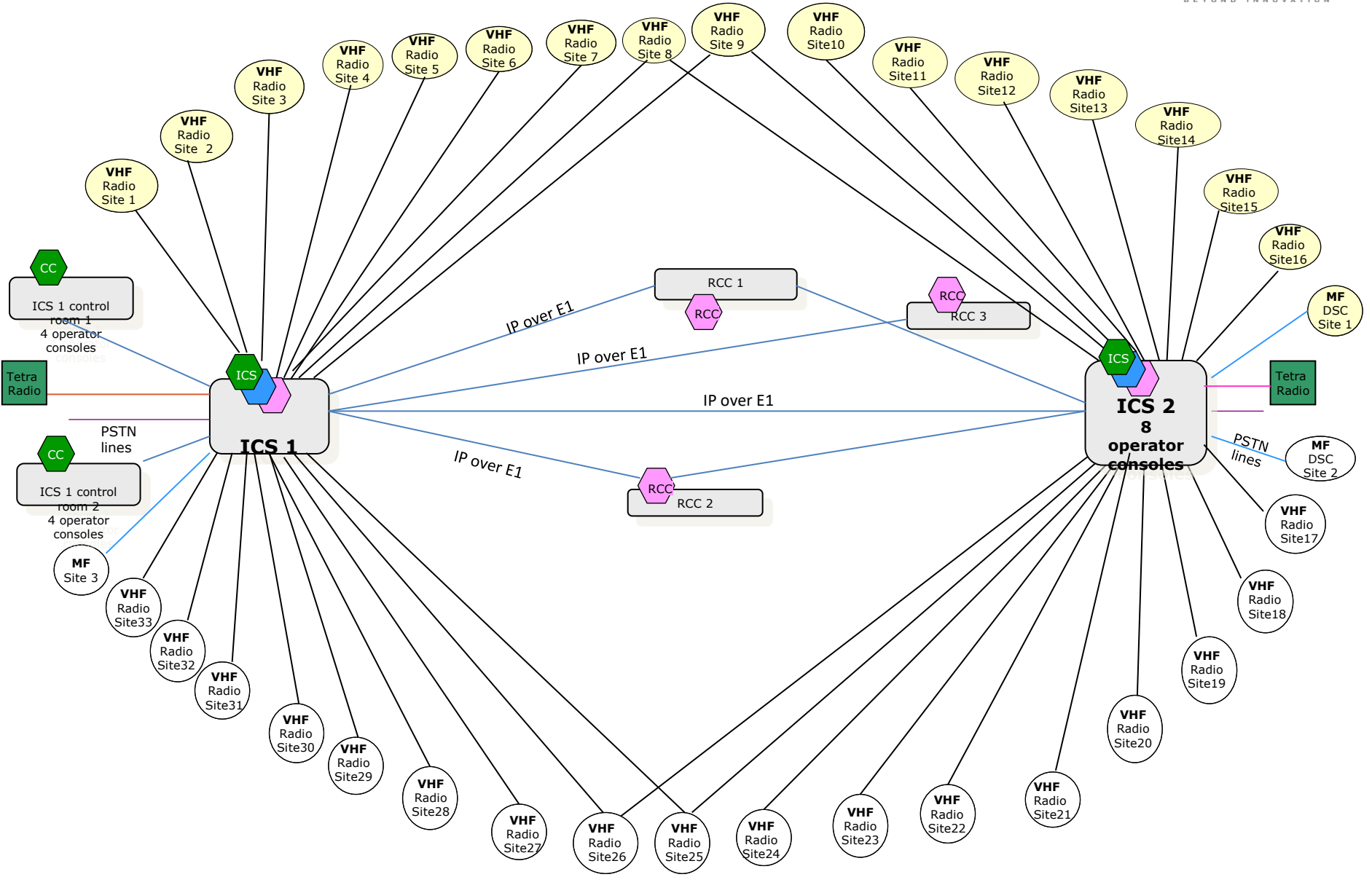


Network Rail – Northern Line Segment





Selex-Tetra Network – Vipers – TDM Over IP





A sample of Case Communications Customers

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Sydney
WATER



Statoil

Honeywell



KONGSBERG



AT&T



REUTERS

Schneider
Electric

Crown
Commercial
Service
Supplier



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NATS

BAE SYSTEMS



South Yorkshire
Fire & Rescue
WORKING FOR A SAFER
SOUTH YORKSHIRE



THALES



SIEMENS



Crown
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