CAVERA
SYSTEMS

MICRONEL
GLOBAL ENGINEERS

Multiple services
delivered over a single fibre

Communications Simplified

Town 1
(Hospitals, University,
Public Offices, Schools)

Town 2
(Hospitals, University,
Public Offices, Schools)

Village 1
(Hospital, College,
Public Office, School)

Village 2
(Public Office, College,
School)

District Headquarters

OLT

ONU

1.25 Gbps
10 km

1x32

10 km

1x16

10 km

1.25 Gbps
10 km

1.25 Gbps
10 km

1x4

1x8

5 km

5 km

5 km

5 km

1x8
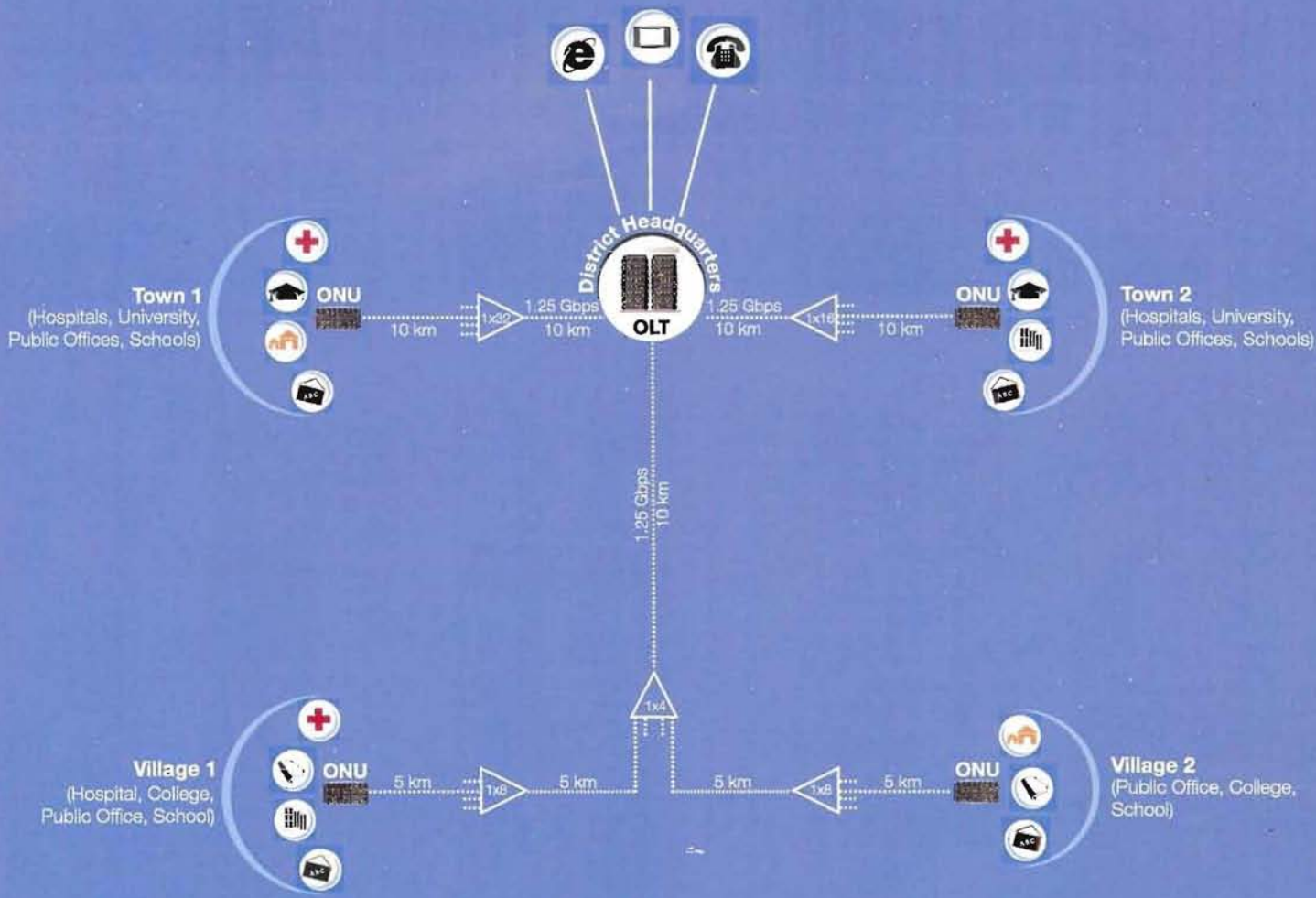
Cavera Systems enables next generation ultra high speed communications and digital entertainment services over gigabit optical fibre network.

Cavera Systems developed innovative VERAPON optical access systems to enable gigabits of data with multiple services over single fiber to every customer for distances up to 20km.

Cavera's Fibre Optic Solution can be used for the implementation of the following:

Campus Networking
Voice, Data, Satellite Video, Analog Video, Video Security and Surveillance, Video Conferencing, WiFi

District Wide Area Network
First Mile / Last Mile Fibre connectivity to every village for all e-Governance applications

Residential Communities
Multiple Services of multiple service providers over single fibre to every resident

Hospitals
Voice, Data, Video on Demand, Tele-Medicine, Satellite TV, Cable TV, Video Conferencing, Virtual Patient Tour by Doctor

Knowledge Networks
High Bandwidth Connectivity over Fibre for the Schools, Colleges, Universities, Hospitals and Government offices in each district and village.

Applications in Business, Healthcare, Hospitality and Housing

Cavera's passive optic network technology is a unique turnkey solution that gets all your cabling organized, for life.

Combinations of various applications would be found useful for any of the above business sectors.

- Super Speed Internet
- Cable TV
- DTH
- Security and Surveillance
- Data, Voice, Web and Gaming
- Video on Demand
- Community Wi – Fi
- High Definition Television
- Home Automation
- Voice over IP

Cavera Systems deploys an integrated communications and entertainment network within a community and connects the system to various service providers. Each customer is connected to the communications centre through a single mode passive optical network to enable multiple services through a single fibre optic cable.

Cavera Systems

Cavera Systems is a privately held Optical Access Company started by successful Silicon Valley veterans with a mission to enable Ultra High Speed Communications and Digital Entertainment services over Fibre Optic Networks.

Cavera's experienced team has developed innovative next generation optical access technology solutions for residential and business communities.

Cavera Systems is leading the next generation optical IP access solutions. Cavera prides itself in establishing strong commitments to unparalleled excellence in customer service while providing a full spectrum of integrated systems, value added solutions that include network engineering, network design and installation of network solutions.

Cavera Systems leadership includes Venkat Vankayalapati, who earlier started Catamaran Communications which developed 40Gbps SONET / SDH Framer / Mapper Silicon Chip that was acquired by Infineon Technologies, AG in 2001.

CAVERA
SYSTEMS

EXISTING SOLUTION BASED ON COPPER

Business

Residential

Voice Services | Data Services | Video Security | Video on Demand | Digital Television | Analog Television | Gaming | Web Surfing | Telephone

▶ **Separate Copper Wire for each service**
▶ **Separate Copper Wire from each provider**
▶ **Copper: Low Bandwidth and Distance Limitation**
▶ **Copper is as expensive as Optical Fiber**
▶ **Difficult to Manage**
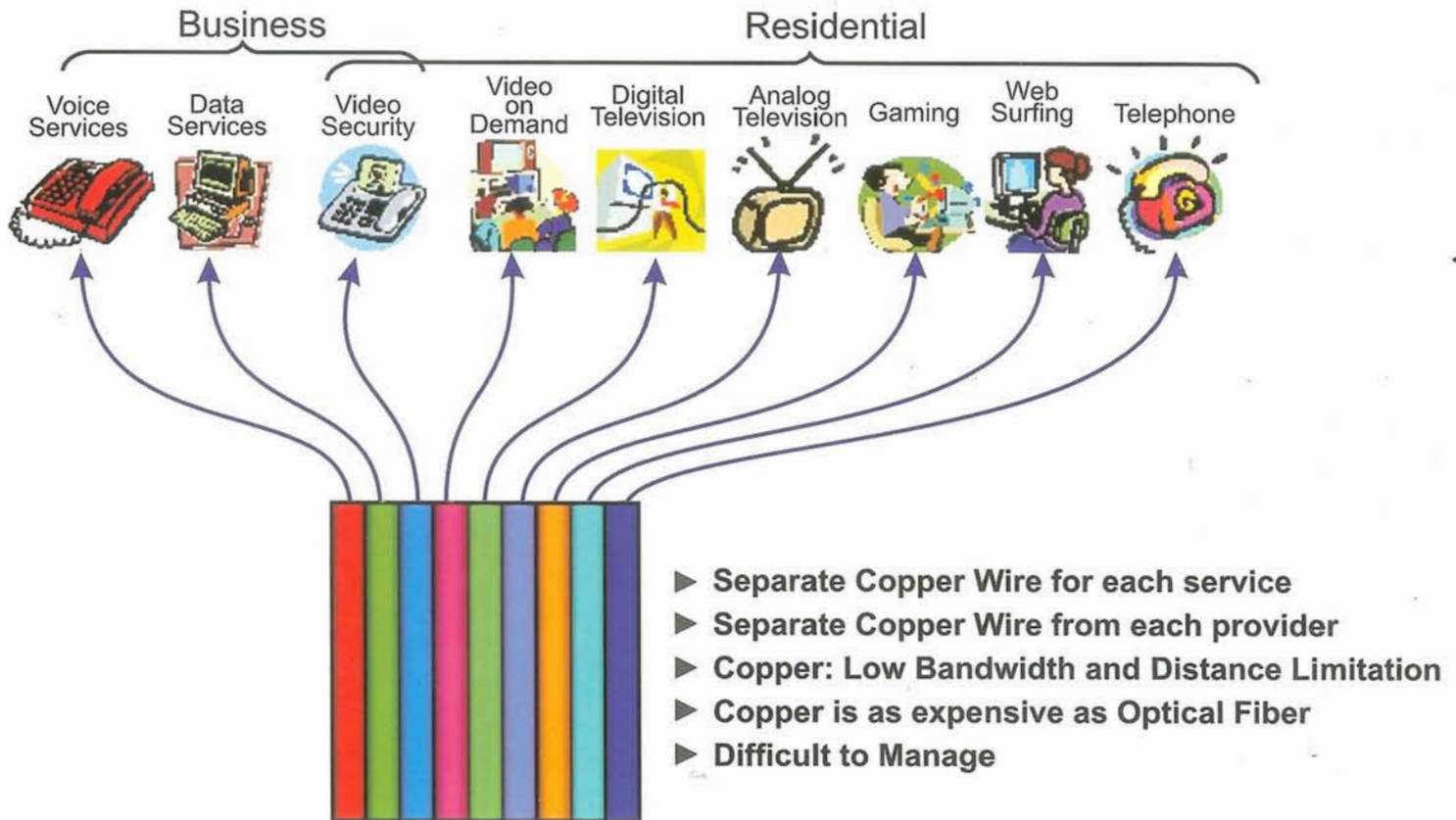
NEW SOLUTION BASED ON PASSIVE OPTIC FIBER

Bandwidth for Business Users:
256kbps to 100Mbps

Bandwidth for Residential Users:
256kbps to 100Mbps

Video Security | Data Services | Voice Services | Video on Demand | 200 Ch + Digital Tv | Analog Television | Gaming | Web Surfing | Satellite Radio

Nine Services Can Be Offered On Single Fiber

▶ **Single Mode Optical Fiber**
▶ **Ultra High Bandwidth of One Gigabites/Sec**
▶ **User Bandwidth: 256kbps to 100Mbps**
▶ **Provisional Bandwidth Increments of 64kbps**
▶ **Easy to Manage**

Single Mode Optical Fiber

Micronel
GLOBAL ENGINEERS

CAVERA NETWORK SOLUTIONS

1 Gigabit Ethernet PON - 20 Kms

Router

Video Server

L2 Switch

VOIP Gateway

VL 100

1Gbps

Optical Line Terminal

10/100Mbps

10bps

Passive Optical Splitter

1:8

1:4

1:4

1:4

1:4

1:4

3:2

MDU

Vn100

ONU

IP SET TOP BOX

Television

IP Phone

PC

Vn100

ONU

IP Phone

Laptop

Television

Vn100

ONU

IP SET TOP BOX

IP Phone

PC

Residence

Internet

Vera OS

EME Server

Apartment

Central Office

Public Offices, School

Residential

Building

ONU

ONU

ONU

ONT

OLT

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