

Class 5 Fixed Network Transformation

Reliable partner to evolve your Telecom Solutions

WHY WE NEED?

Challenges for traditional TDM network

VS

A Fixed Network Transformation delivers

1

Rapidly-aging fixed-line networks approach the limits of their designed lifespan.

Service providers run a growing risk of major service interruptions

2

TDM equipment is increasingly difficult and expensive to maintain.

3

TDM Central Offices often require the same switch counts while fewer and fewer fixed lines are being served.
TDM costs are rising, revenues are falling.



1

Fixed-line transition solution that reduces immediate and long-term costs

2

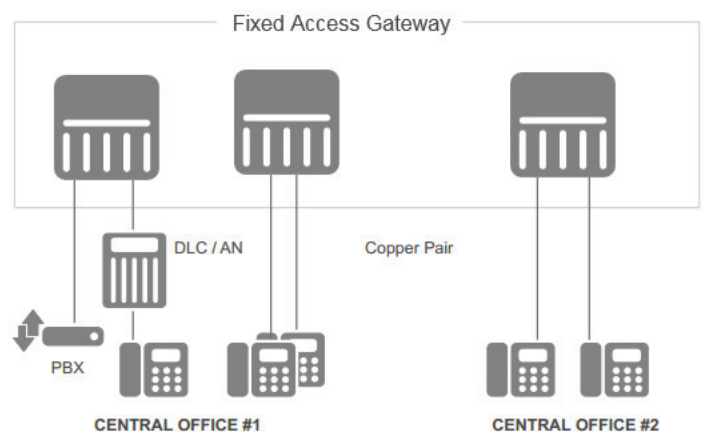
Create new services and revenue opportunities, and open a proven, low-risk pathway to a modernized network

WE ARE HERE TO SOLVE YOUR PROBLEMS - OUR SERVICES

Solution Features

- ✓ Replace multiple TDM switch cores with a centralized service delivery node
- ✓ Avoid a complete replacement and leverage their installed TDM infrastructure
- ✓ Full system integration and deployment, with gateway products to interconnect existing line access equipment
- ✓ Include API integration and adaptation services, OSS/ BSS integration
- ✓ Enables transformed networks across virtualized or cloud environments

Centralized and Consolidated IMS/Pre-IMS Core



BENEFITS OF NETWORK TRANSITION



Significantly Reduces Risk

by eliminating TDM Central Office equipment



Saves Money

reducing both capital costs and recurring operating expenses by leveraging existing line access



Attracts and Frees Capital

with potential low-interest funding from world banks and foundations, and by redirecting



Improves Subscriber Stickiness

via service convergence and residential applications delivered to the TDM customer base



Open Standards

that help avoid proprietary hardware and vendor lock-in



A Graceful Migration Path

that includes physical, virtual and NFV cloud options



Network Licensing Plans

for elastic services and on-demand applications for new operator business models

TMA COMPETENCIES

Overall Telecom Competencies

- 23 Years of Experiences in NGN Solutions
- Best in Telecom Software Services in Vietnam
- Trusted by World-Class Telecom Service Providers
- From Specs/Reqs analysis, Design, Implementation, Testing to Deployment, Maintenance and Support
- Flexible High experienced in both Waterfall & Agile
- Experienced Resource Pool, Easy to Scale

Class 5 Fixed Network Transformation Solutions Competencies

- Solid knowledge (10+ Years) about Industry standard protocols (H248, NCS, MGCP, GCP, GR303, V5.2, TR08, SIP, RTP, SNMP, etc.)
- Core Technologies Enabled: Cloud, NFV, IaC, vCD
- Standardized in-house Framework and Model for Automation, CI/CD

Technologies

Domains

PSTN, ISDN, IMS, AS, IP PBX, traditional PBX, Billing, Networking.

New Technologies

Virtualization, Cloud, NFV

Key Functions

- **Diverse Hardware Support:**
Specific line/trunk gateways, Virtualization on Red Hat Linux-compliant, High Availability, Rack Mount Server
- **Management:**
SNMP, XML, SOAP/HTTP, REST API
- **Broadband Supported:**
Cable Multimedia, FTTx, xDSL, PRI/T1/E1

Protocols Stack

- **TDM-based:**
ABI, GR303, TR08, V5.2, SS7, PRI, CAS.
- **IP-based:**
Megaco H248, NCS, MGCP, GCP, SIP, H323, RTP/SRTP
- **Others:**
G711, G729, DTMF, SCTP, TCP, TLS, IPv4, IPv6, IPSec

Frameworks and Solutions

In-house Automation Framework

Design Solution

- Languages and Frameworks:
C/C++, Python, Java, perl
- High Availability Solutions
- Cloud/NFV Enabled

Standardized CI/CD model

- Jenkins, Pipelines, Docker, Continuous Testing

Tools

Testing tools

HP QC, Atlassian Suite (JIRA, Confluence, Crucible, BitBucket), Wireshark, TCPdump, SSH/Putty, SIPp, LDAP.

Security tools

Nessus, CIS, Codenomicon (Linux penetration testing tools)

Platforms



Linux
RHEL

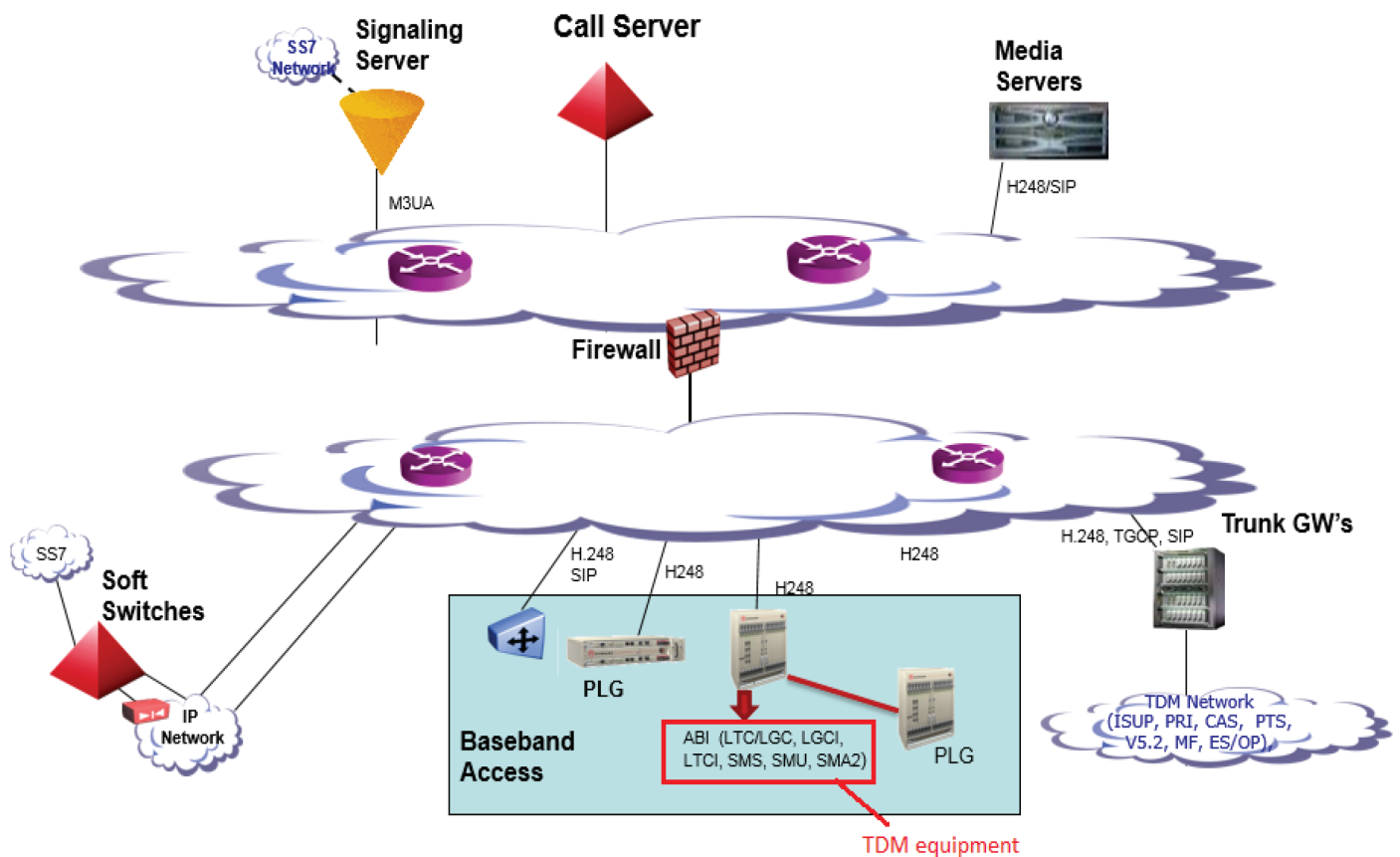


Virtualization
KVM, VMWare, IaC, OpenStack



Cloud
NFV, AWS, vCD

CASE STUDY – Class 5 Network Transformation



Description

Testing support for the class 5 network transformation using a specific gateway

Services

Migration,
Installation,
Upgrade

Traffic
Performance

Call
Processing

Services

Platform

RHEL, Specific H248 gateway,
Access gateway

Framework

REST API, High Availability,
SNMP

Network

PSTN, ISDN, ABI, IP