Telecom Fiji
MPLS Network Case Study

Introduction

- Telecom Fiji Introduces MPLS network back in 2008
- Planning & Design – 2008
- Proof of Concept (PoC), Acceptance Test - 2009
- MPLS Training – 2009
- Installation & Final testing – late 2009
- Test MPLS service on Telecom Fiji WAN – 2009
- Commissioned 1st Cooperate Customer – 2010

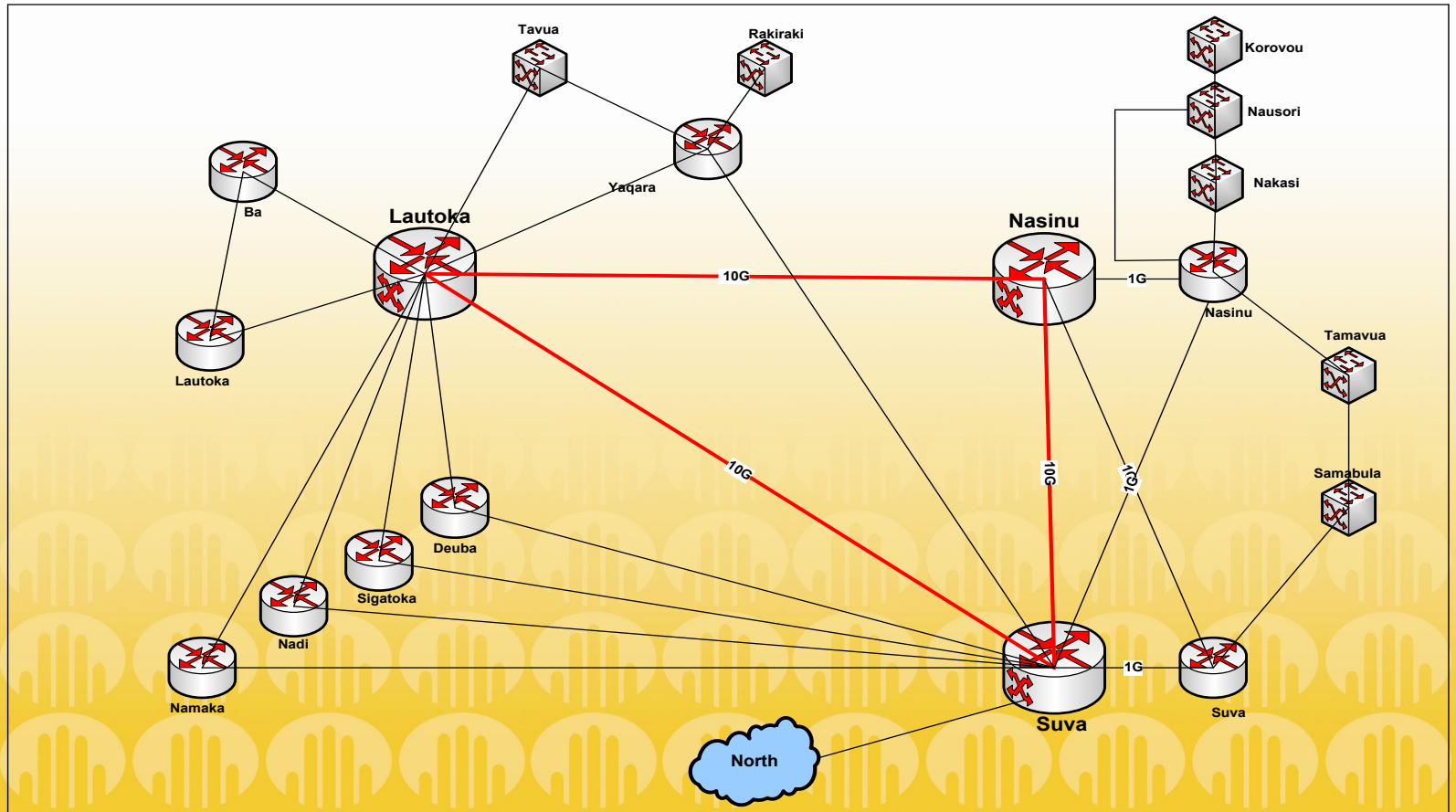
Legacy Network Transformation

- **Technology Trend for Telecom Fiji**
  - Analogue – early days
  - PDMX - 1987
  - X25 (Packet switching WAN) – 1991
  - Digital Data Network (DDN) – 1992
  - Frame Relay - 1997
- **Features & Limitations**
  - Maximum Speed – 2Mbps
  - Interfaces - X21, V.24 or RS232, V.35 and G.703
  - TDM Network

Why MPLS?

- Bandwidth demand
  - up to 100Mbps for Metro Services
  - Up to 50Mbps IPVPN
- Easy deployment and Management
- Customers can view their link performance
- Monitor End-to-end services
- Proactive to faults

MPLS Network



MPLS Core

- P Routers - 3
- PE Routers – 16 (one in each town)
- Aggregate Switches – 16 (mostly one in each town)
- Provisioning tool for Service Provisioning
- Management tool for real-tile monitoring.
- ACS tool for secure access of all MPLS equipments.
- VPN service for remote login

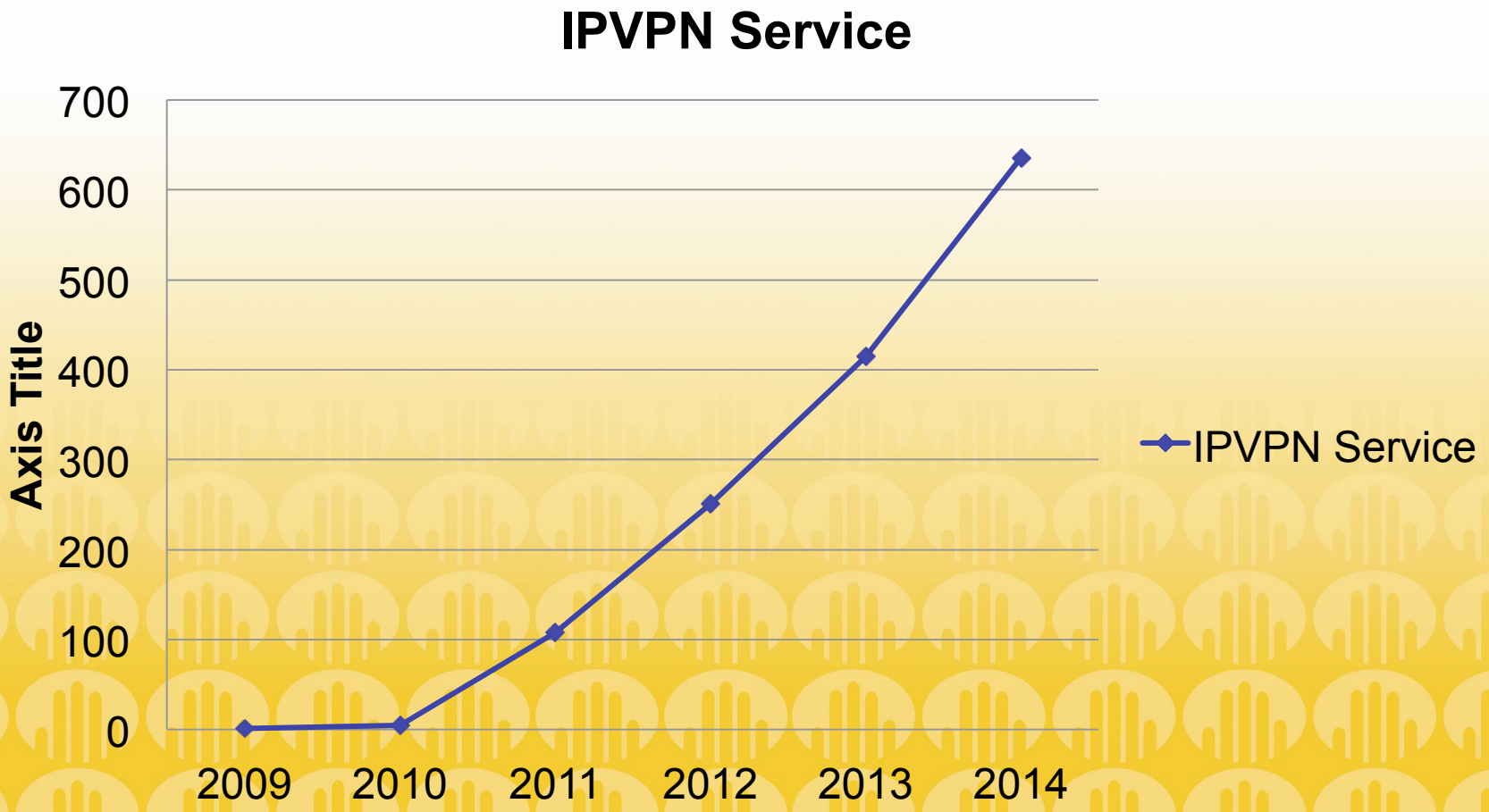
Last Mile Access

- Fibre
  - Spur Links
  - Metro Ring
- Copper
  - SHDSL
  - ADSL
  - DDN
- Radio

Services on MPLS

- **L2VPN**
  - Customer manage their own routes
  - Point-to-point connection
- **L3VPN**
  - Routes also manage by Service Provider
  - Cloud service within Customer network
  - Easy to deploy and very scalable
- **VPLS**
  - Layer 2 Mesh Connection
  - Extend LAN to more than 2 sites

MPLS Growth


IPVPN Service
Axis Title
700
600
500
400
300
200
100
0
2009
2010
2011
2012
2013
2014
IPVPN Service

Challenges

- L3VPN Service.
  - Exchange routes with customer
  - Who will provide PE – CE ip address?
  - Routing protocol used.
- L2VPN Service
  - Vlans exhaust
  - Multiple L2VPN connection to HUB site

Challenges Cont...

- Misunderstanding of network requirements with Sales people & also from Customer.
- Migration from Legacy DDN to MPLS due:
  - Resistance to change
  - Interface change from X.21 to Ethernet
  - Concept change

Results & Outcomes

- Most customers are using MPLS in Fiji because of:
  - High Speed capacity
  - Scalable
  - Network layer (routers) are now provided and managed by Service providers.
  - Upgrades done in minutes
  - Flexibility to offer other services such as dedicated Internet, VoIP …etc
  - Simple Integration to IP_PBX

Thank You!