The Multi-play Enabled Residential Gateway

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Multi Service Access Everywhere
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> Placing the Residential gateway (RGW) in the home network
> The multiplay aspect
> The inter-switching aspect
> The enablers in the RGW
> Cases:  - UPnP device Management
         - xDSL connectivity maintenance
         - outgoing VOIP call
         - hotspot
         - accessing photo
         - parental control
         - incoming telephone call
         - backup telephony
Where are we and what can be done

Home network

Broadband network

Servers

Internet

Home automation system

Ethernet cabling

Electric wires

Powerline adapter

Residential gateway

Broadband network

PVR

Hard disk

Printer

Wi-Fi

DECT

http://www.ist-muse.eu
From Triple-Play to Multi-Play

- Multimedia switching WAN-LAN
- Minimum of ports
- Minimum of enabling

- Full Multimedia switching
- Multiple ports
- Service support
- Enablers
- Peripherals

Multiplay RGW

http://www.ist-muse.eu
The Triple play switching

Packet processing functions:
- QoS, Classification, Queueing, Scheduling, NAT
Multi-play RGW

- Ports
- WAN layers
- LAN layers
- Management (system) plane
Configuring a UPnP device
Checking connections on WAN side

Maintenance and monitoring

Test Connectivity

ICMP: IP Ping/Traceroute,..
ETH OAM: EFM, CFM
PHY OAM: e.g. ATM connectivity

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Setting up an IP phone call

- SIP
- SIP Back2Back User Agent
- QoS
- CAC
- Switching

IP Phone

http://www.ist-muse.eu
Hotspot access – FMC control; Multiprovider

Hotspot user device

HTTP

Intercept

Authentication Enabler

IP-Forward

802.1x

AAA@
Accessing photos from outside

http://www.ist-muse.eu
Parental control – based on time period

Danny: Not after 22.00h
Multi-device call offering

> To analogue phone and VOIP phone
Tel. Communication on no BB connectivity

- FXS
- FXO
- i-ATA
- PSTN int.
- Maintenance and monitoring
- No BB connectivity
- Through-connect FXS/FXO
- SIP Stack
- No BB connectivity
The multi-play residential gateway has far more functions and enablers than the triple play residential gateway.

A number of these enablers have been positioned in the RGW block diagram.

A number of cases were described showing how the enablers are really helpful to the user.