Broadband Forum FMC Standardization Update

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Multi-SDO meeting on FMC Network Management

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Broadband Forum

Engineering smarter & faster connections

Architecting a connected lifestyle

- Defining best practices for global networks
- Enabling multi-service and content delivery
- Establishing technology migration strategies
- Engineering critical device & service management tools
- Redefining Broadband

• Who are we?

- Industry consortium made up of approximately 200 service providers, vendors, consultants, academia and test labs
- Predominant broadband industry forum since **1994**
- Engineer technology solutions to help service providers achieve standards based, economical and effective broadband deployments

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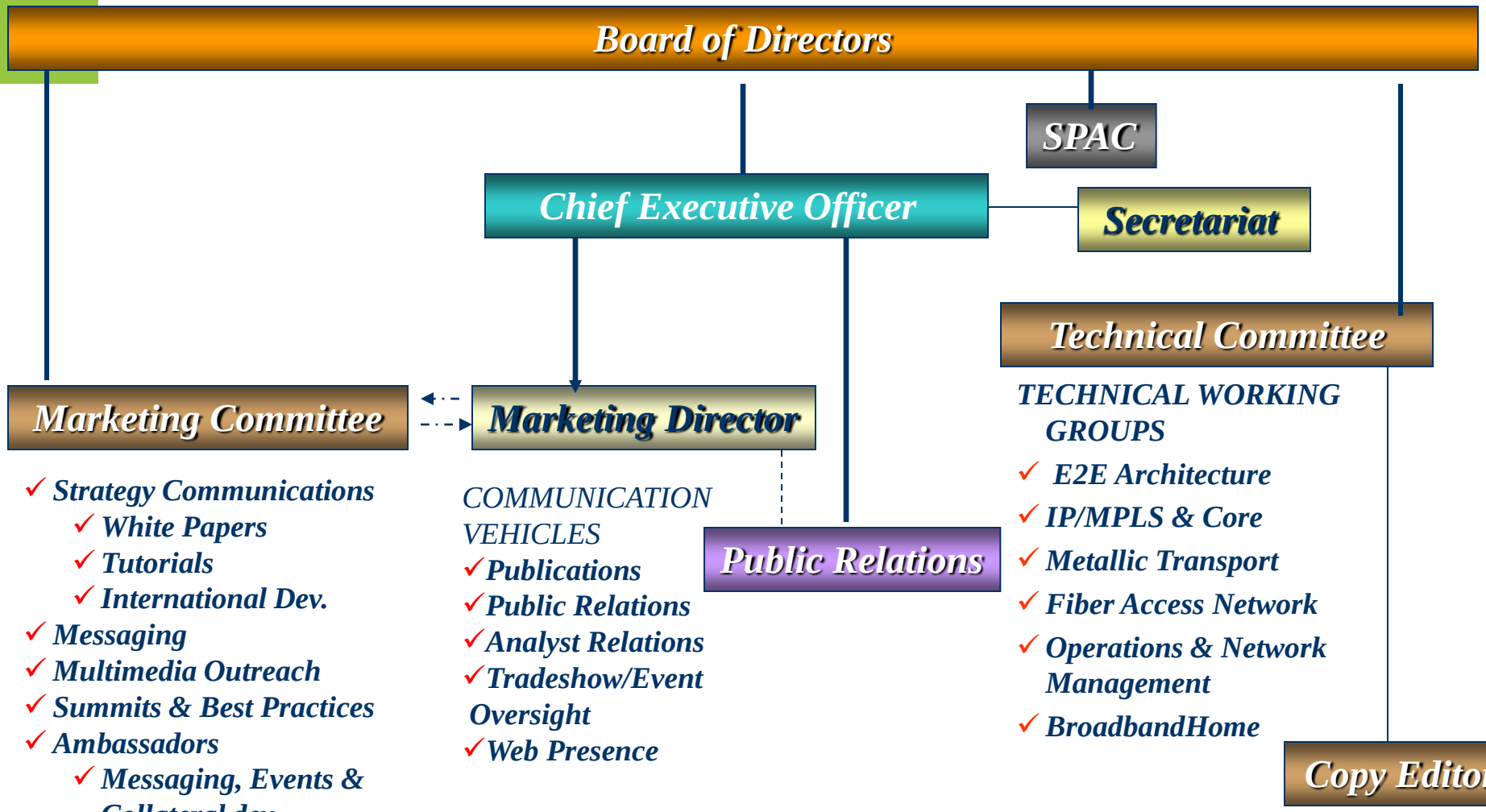
Broadband Forum Organization



Broadband Forum Scope

broadband suite™
management
network
user

PARTNER APPLICATION FUNCTION

PARTNER CONTROL FUNCTION

Management

Quality of Experience
TR-069 (CWMP)
Identity, Accounting and Policy
Operations and Network Management
DSL Quality Management

TR-069 ACS

TR-126 IPTV
Quality of Experience

TR-176 DSL
Profiles for IPTV

IDENTITY

BILLING

OSS

CWMP
TR-069

SERVICES

- Internet
- Voice
- Video
- IP/VPN
- Ethernet
- ATM
- TDM

Network

TR-144 Multi Service Requirements

Multi-Service Core

VoD
TV
SIP

Content Network

IP/MPLS

Mobile Network

BSC
RNC
SGW

Edge

Aggregation

TR-101, TR-156
Ethernet
Aggregation

Access

P2P E-FTTx
GPON
EPON
DSL

User

Connected
Home & Office

UPnP FORUM
dlna

Residential
Gateway
Management

Customer
Premise
Device
Management

Smart Grid

Home Networking Protocols

Multi Service Architecture & Requirements

Certification, Test and Interoperability

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BroadbandManagement™

BroadbandManagement™ facilitates the BroadbandNetwork™ and BroadbandUser™ domains to enable new services and assure end-user Quality of Experience.

BroadbandManagement™ is a collection of the following:

- Network & Element Management
- DSL Quality Management (DQM)
- CPE Management via CWMP (TR-069)
- Quality of Experience
- Layer 2 Control Protocol (L2CP)

E2EA WG

Scope: Access architecture encompassing interface definitions and nodal functional requirements from Residential Gateway & Business Gateway through Access Node, aggregation network and Broadband Network Gateway (BNG) to peering interfaces with network and application service providers.

E2EA WG Key Project areas:

- *IP v6 and IP migration*
- *NG Arch*
- *FMC*

Specs in development associated with key projects: WT-145, WT-146, WT-134, WT-178, WT-201, WT-203, WT-207, WT-242

FMC related draft specifications:

- *WT-146: IP Session Mgmt. & Authentication*
  - *Authentication discussion within BBF on how to implement the lower layers (e.g. 802.1X, RG impact, RADIUS, etc):*
  - *Agreement to include 802.1X-based authentication in WT-146*

- *WT-134: Policy Control Framework for Fixed Broadband Networks*
  - *BPCF is rather new to BBF:*
  - *Detailed policy information model (PIM) elements are under discussion in WT-134*

- *WT-203: Interworking between Next Generation Fixed and 3GPP Wireless Access*
  - *S9* interface between the PCRF (3GPP) and BPCF is agreed on a high level.*
  - *Impacts on BBF nodes discussion to be addressed in the context of*

BBF Questions

- We need to know more about specific FMC related requirements for network and device management
  - Our work so far has been mainly in the area of interworking of fixed and mobile network architecture in support of FMC services
  - However, we have worked heavily with both 3GPP and 3GPP2 in developing management techniques for Femtocell APs – how will new FMC management requirements effect them?

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