



Understanding the MSF

Who is the MSF?

- Founded in 1998
- Open consortium of telecommunications companies (mix of large operators, large vendors, niche suppliers, test tool suppliers et al)
- See www.msforum.org



MSF Principal Members- 2011



What Does the MSF do?

- Focuses on developing meaningful physical implementations of standards
- Organises large-scale interoperability events to test and validate standards in implementations of interest to major carriers
- Provides significant resource for members to leverage for achieving multi-vendor solutions
- Provides key implementation feedback to vendors, carriers and SDO's
- See <http://www.msforum.org/interoperability/GMI.shtml> for details of all MSF IOT events

MSF VoLTE IOT 2011

- **VoLTE IOT event in September 2011**
 - Hosted by Vodafone and China Mobile, backed by GSMA.
 - Testing Scenarios included
 - VoLTE (compliant to GSMA IR.92)
 - Roaming & Interconnect (compliant to GSMA IR.65 & IR.88)
 - Intra-LTE Handover,
 - Robustness Testing (“fuzzing”)
 - Results liaised to GSMA, 3GPP, NGMN & ETSI

MSF/GSMA VoLTE IOT White Paper



MSF/GSMA VoLTE IOT
White Paper available at
www.msforum.org/interoperability/VoLTE.shtml

Host sites:

China Mobile in Beijing and Vodafone in Düsseldorf



MSF/GSMA VoLTE IOT Sponsors and Supporters

Gold Sponsors



Silver Sponsors



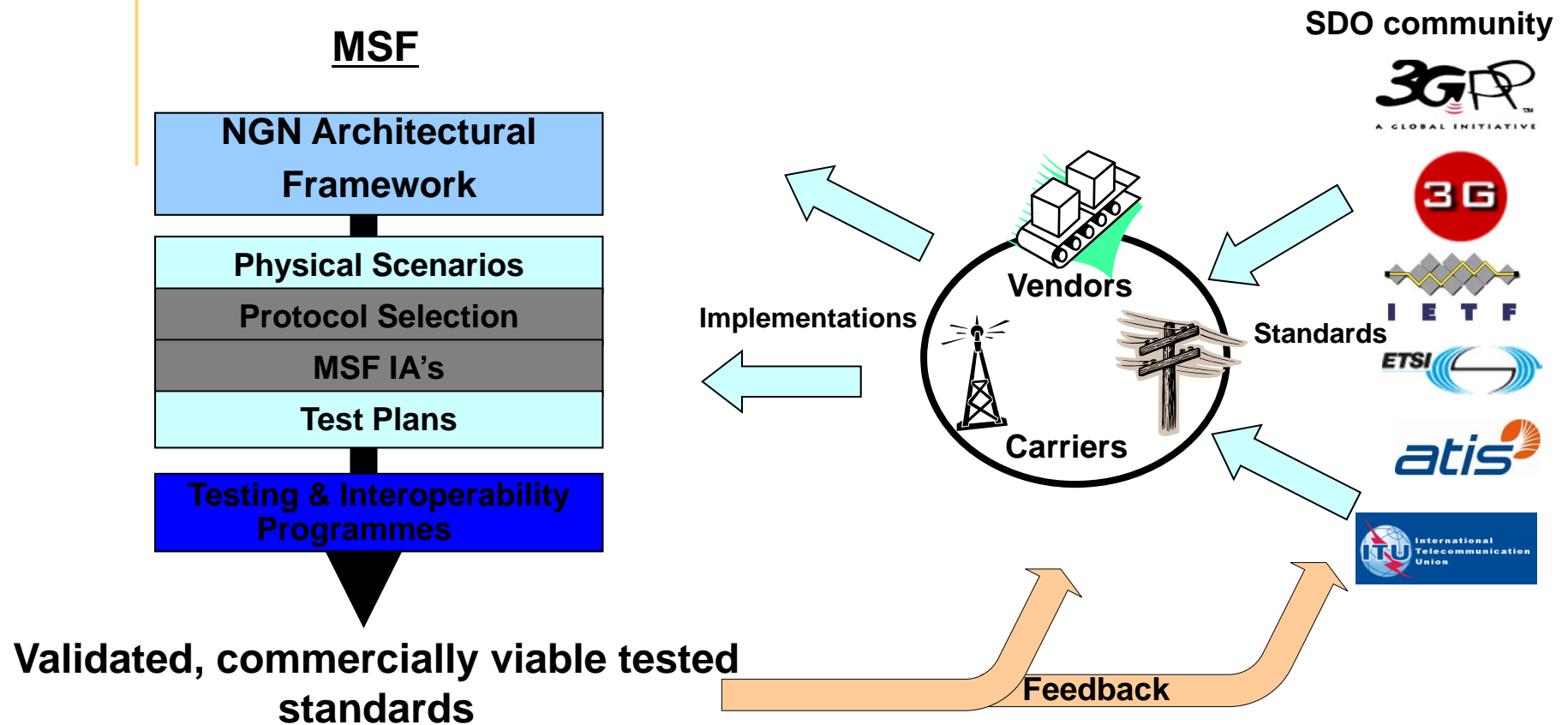
Headline Items 2012

- **VoLTE (Voice over LTE) IOT**
 - Working with ETSI & GSMA
 - Focus on RCS/RCS-e
 - EPC conformance testing in collaboration with ETSI
- **Network-to-Network Interface (NNI) Testing**
 - Validating GSMA's IPX and i3Forum's inter-connect profile
 - Verifying ATIS/ETSI inter-connect standards
- **Robustness Testing ("fuzzing")**
 - Best practice for reliability/resilience of core network elements



Historical Perspective

How Does the MSF work?



What are the Benefits of Open Interoperability Testing?

- Operators and Equipment Vendors that participate in Open Interoperability Events learn how multivendor next-generation products and networks will interoperate in the real world.
- That information translates into several financial benefits:
 - Reduced time to market for deployment of interoperable solutions
 - Decreased costs and resources to resolve interoperability issues
 - Improved protocol documentation through facilitating clarifications in the tested standards via feedback to the appropriate SDOs
 - Thoroughly evaluated architectural framework for cooperatively designing end-to-end networking solutions

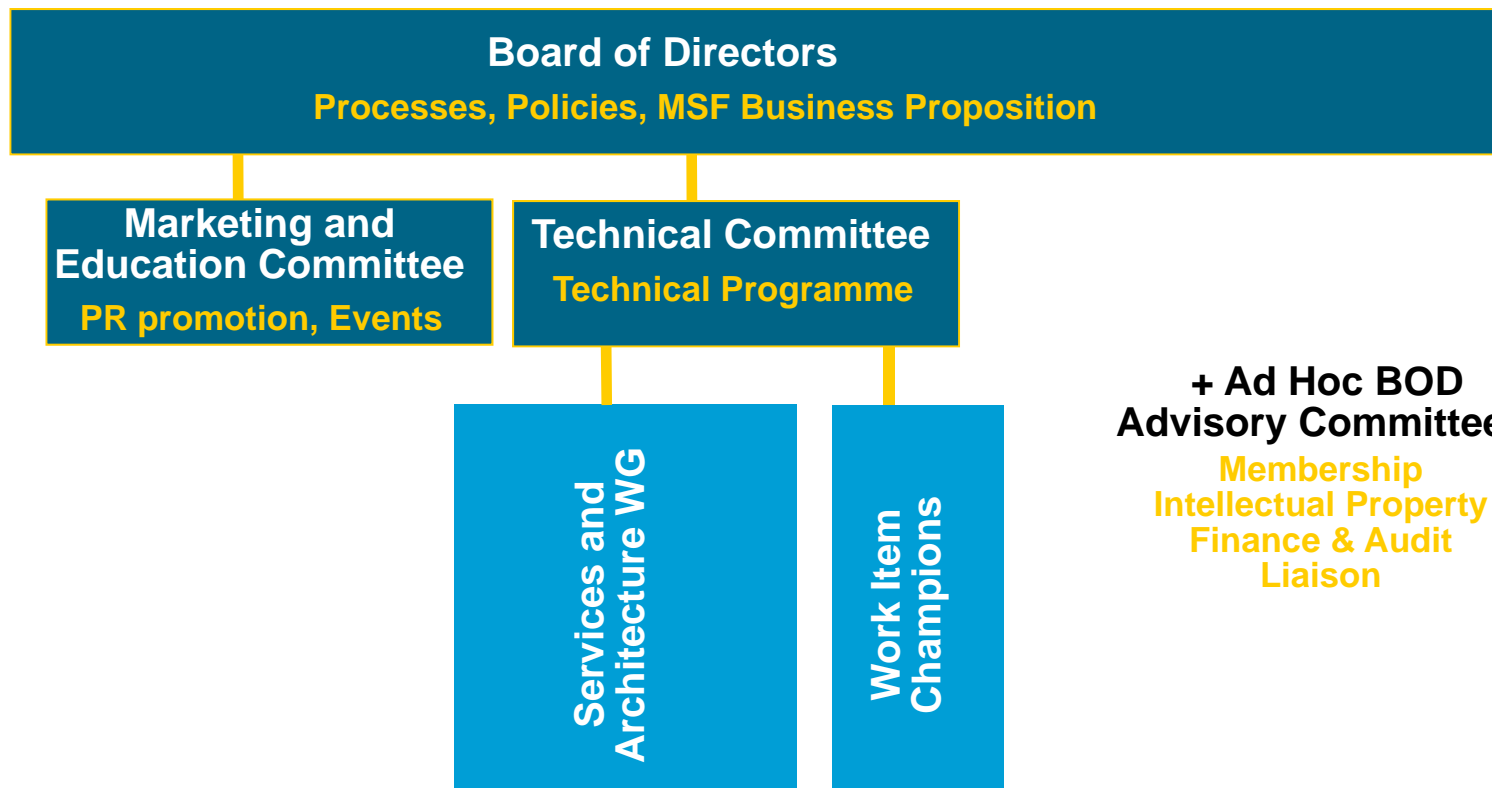
MSF GMI IOT Events

- Historically: MSF held Global MSF Interoperability Events (GMI)
 - Multi site, multi protocol, end-end
 - GMI events reflected the needs/focus of the telecoms industry at the time
- GMI2002: focused on Gateways & Controllers (MGCP, H.248)
- GMI2004: focused on SIP Servers
- GMI 2006: focused on IMS
- GMI 2008: added multiple access types into the IMS core (3GPP, 3GPP2, WiMAX, Broadband, TD-SCDMA, POTS) plus IPTV

MSF Post GMI IOT Events

- Post GMI 2008, MSF changed strategy to running more focused events on an “as needed” basis
 - Restructuring of MSF Working Group structure
 - Parallel work streams (ad-hoc Working Groups)
 - Executed LTE IOT Event in March 2010
 - Executed Performance IOT Event in November 2010

MSF Organization



MSF Events: LTE IOT

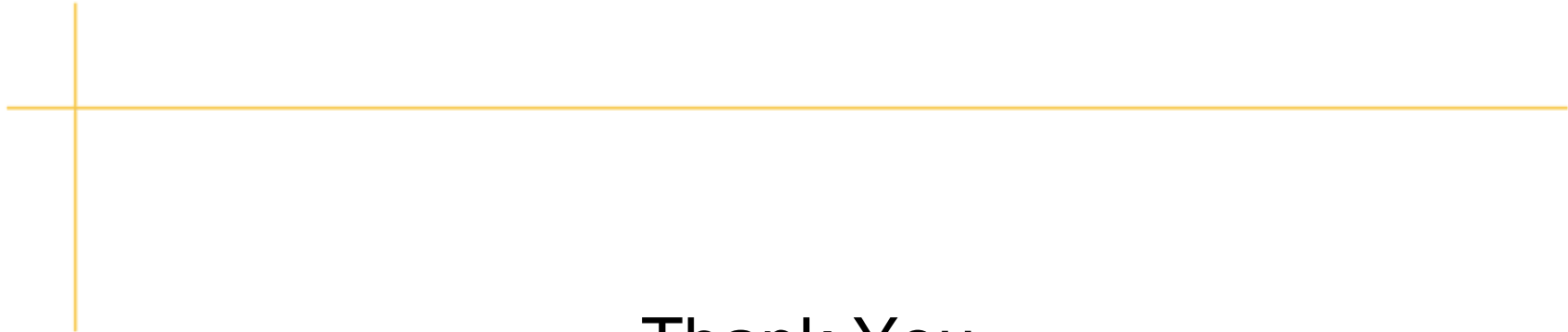
- **LTE IOT event in March 2010**
 - Hosted by Vodafone and China Mobile,
 - Testing Scenarios included
 - Basic EPC Interoperability
 - Roaming
 - Non-LTE access to the EPC,
 - Handover,
 - Robustness Testing (“fuzzing”)
 - Results liaised to 3GPP, NGMN, LSTI & GSMA
 - White Paper available at <http://www.msforum.org/interoperability/LTE.shtml>

MSF Events: P-IOT 2010

- **Performance IOT 2010 (P-IOT 2010) Event in November 2010**
 - Focussed on the management reporting interfaces of Session Border Gateways (access & N/W side)
 - Voice/Video/Data sessions under varying loads,
 - Validated reported information against i3F defined KPIs
 - Tested QoS reporting and problem isolation/location,
 - Results liaised to i3Forum & ATIS PTSC
 - White Paper available at [http://www.msforum.org/interoperability/MSF%20P-IOT%20White%20Paper 2 2011 FINAL.pdf](http://www.msforum.org/interoperability/MSF%20P-IOT%20White%20Paper%202%202011%20FINAL.pdf)



**MultiService
Forum**



Thank You