



## ■ ■ ■ ITU G-PON Pavilion @ NXTcomm 2008

**Public Interop Demo and Pavilion Overview**  
*June 16- 19, 2008, Las Vegas, NV, USA*



**Telcordia Contacts:**

Rob Bond  
G-PON Pavilion Coordinator  
Network Product Integrity/Access Technology  
rbond@telcordia.com  
+1 732.699.3445

***Prepared for:***  
**Audio Conference Call #1**  
**12-February, 2008**

# ■ ■ ■ Outline

- Purpose and Scope
- Planning Status
- Logistics Overview
- Guiding Principles and Responsibilities
- Schedule Highlights
- Importance of OMCI
- Next Steps



## G-PON Pavilion

### *Purpose and Scope*

- A live, public, demonstration of G.984.x technology and interoperability
  - Demonstrate vendor and service provider support for G.984, including recent extensions
  - Demonstrate cross-vendor interoperability via application layer service delivery (voice, video, high-speed Internet, possibly network-based gaming )
  - Showcase participating vendor's G-PON solutions to the global marketplace
  - Build upon FSAN private test events
  - “Celebrate” the success of the ITU-T and FSAN G.984 efforts
- Build on the success of the NXTcomm 2007, Telecom World 2006 and Supercomm 2005 Pavilions
- Not a rigorous “test event”, although pre-event interoperability testing between Demo Group partners is required
- Focused on 1244/2488 Mbps (up/down), G.984 compliant, G-PON products capable of delivering voice, video and data services to residential and business customers, plus G.984.re and G.984.5 solutions
- Open to both system and device vendors

- ■ ■ ITU G-PON Pavilion – *the Players*
  - **Pavilion Sponsor/Host - ITU**
    - [Greg Jones](#) (SG15 Counsellor), [Toby Johnson](#) (ITU-T TSB Marketing),
    - [Yoichi Maeda](#) (SG15 Chair)
    - [Dave Faulkner](#) (SG15/Q2 Rapporteur)
  - **Pavilion Coordinator - Telcordia**
    - Rob Bond
  - **Pavilion Supporters – to be determined**
    - Operators supporters being sought
  - **Pavilion Partners – to be determined**
    - Video (Falcon IP – tentative), voice (TBD), and datacom (TBD)
  - **Pavilion Members – see next slide**
  - **NXTcomm – TIA (organizer), Freeman (services mgmt), Las Vegas Convention Center (venue mgmt)**

See Reference Material for business relationship information

- ■ ■ ITU G-PON Pavilion @ NXTcomm – *Status*
  - **Awaiting final cost estimates on booth construction with optional mini-theater element**
  - **Survey of interested companies indicates strong initial support (see next slide)**
  - **Feb 18 (next week): Participation Agreements Distributed (Telcordia)**
  - **Bi-weekly in March, weekly beginning April**

## ■ ■ ■ **NXTcomm 2008: *G-PON Pavilion***

### ■ **Interested company list (as of 1/28/08)**

1. Alphion
2. Cambridge Industries Group
3. Comtrend
4. Corning
5. Ericsson
6. Freescale
7. Iamba Networks
8. Ikanos Communications
9. Motorola
10. Nokia-Siemens Networks
11. TXP
12. XAVi
13. ZTE

Still a sizeable number of other companies that have been contacted but have yet to respond with interest level. Looking to wrap-up active solicitation for participants by 25-Feb. | 6 |

## ■ ■ ■ G-PON Pavilion - *Logistic Overview*

- ~2000 - 4000 ft<sup>2</sup> pavilion (i.e., shared stand) at NXTcomm 2008, June 16-19, 2008, Las Vegas, USA
  - 3600 ft<sup>2</sup> space currently on temporary hold adjacent to the Microsoft stand (see next slide)
- Telcordia to assume the role of Pavilion Coordinator
  - provide for floor space rental
  - provide for the Pavilion stand build (carpeting, furniture, AC electrical service, broadband Internet access to stand, installation and dismantling of stand)
  - provide overall project management of showcase event
  - serve as primary point of contact with ITU (host), TIA (show organizer), Freeman (services manager), and Las Vegas Convention Center (venue)
- Participants (Pavilion Members) to contract directly with Telcordia for above services
  - see Reference Material section for more information on business roles



# G-PON Pavilion - *Guiding Principles*

## Overall Objectives

- Demonstrate the relative maturity and interoperability of G.984 compliant G-PON systems by delivering voice/video/data applications in a mixed G-PON vendor environment
  - Demonstrate new or emerging G-PON capabilities, like G.984.5 (Enhancement Band) and G.984.re (Reach Extension)
- ## Minimum G-PON System Eligibility Criteria – 1244/2488 Mbps (up/down), G.984 compliant, G PON products capable of delivering voice (POTS), video (IP multicast or overlay) and Ethernet data services to residential and business customers. **Potentially include TDM services**
- ## Pairing Arrangements – interested G-PON system and device vendors are individually responsible for arranging pairing partnerships to serve as the mixed vendor environment
- Telcordia will work to facilitate the process of vendor partnering to produce the desired mixed vendor environment
  - Goal of a minimum of a three vendors per ODN (i.e., an OLT vendor, and two ONT vendors) is recommended.
  - Pairing partners are expected to complete some level of interoperability testing prior to the showcase event. Plans for pre-event testing must be submitted to Telcordia.

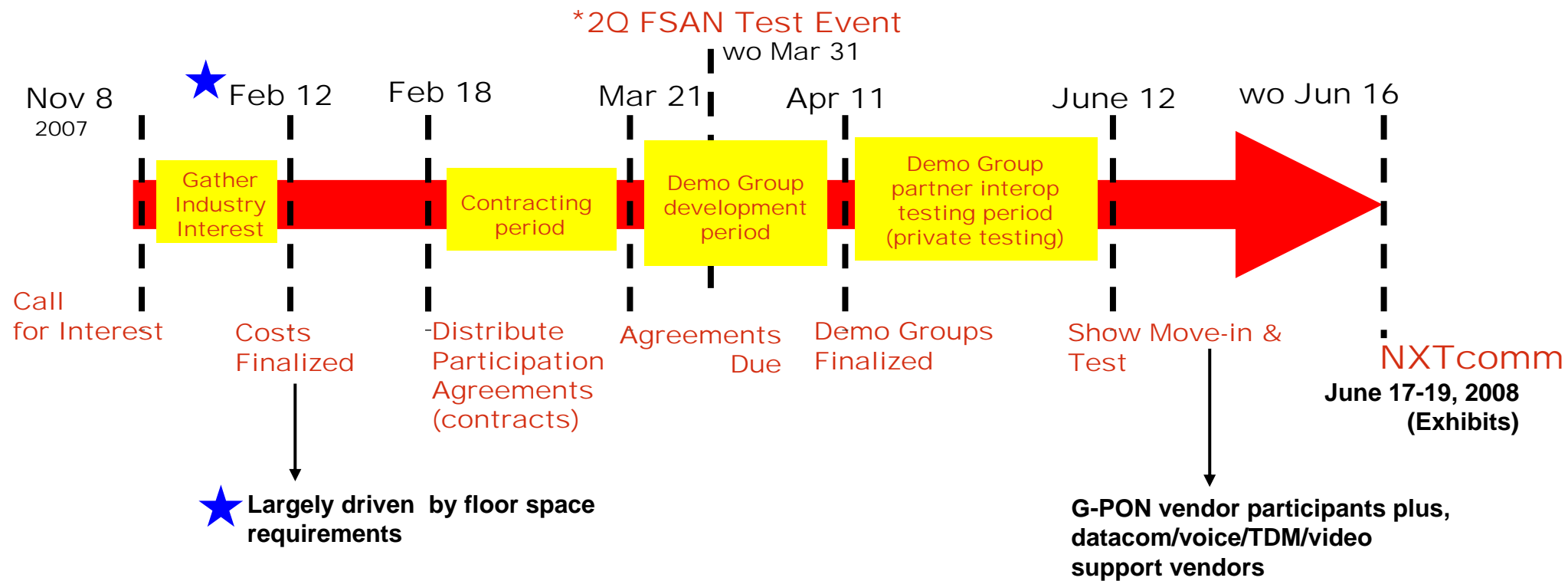
# ■ ■ ■ G-PON Pavilion

## *Participant Responsibilities*

- Execute participation agreement by 21-March (firm deadline)
- Commit resources to meet the Guiding Principles of the showcase event (as previously described)
  - Includes Pre-event testing resources (see next slide)
  - Includes engineering resources at NXTcomm
- Commit resources to actively participate in planning conference calls
- Actively support the process of finding event service node (video/voice/data) partners, as necessary <see Reference section>
- Cover costs not included in the participation fee such as
  - Shipping equipment to and from the NXTcomm event
  - Onsite shipping costs (from staging area at NXTcomm to floor and return)  
Applies to non-hand carried items (typical charged per cubic meter)
  - Onsite Storage charges (typical charged per cubic meter)
  - HDTV video monitors for Kiosk areas of Pavilion
  - Equipment Racks, as needed (e.g., for OLTs)
  - DC Power Supplies (only AC power provided in Pavilion)

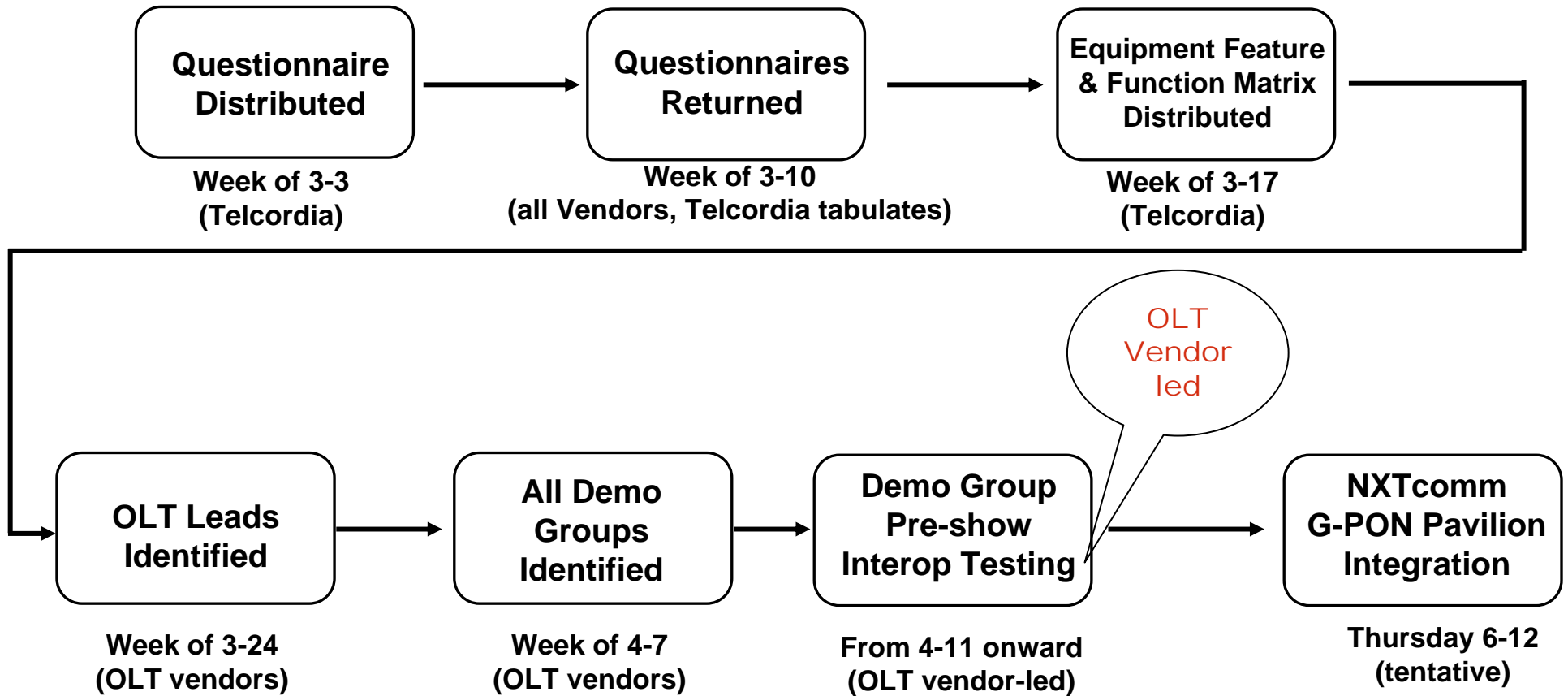
- ■ ■ **G-PON Pavilion: *Pre-Event Testing***
  - **Pre-Event Interoperability Testing** – In addition to the Integration Testing (below), eligible participants will be required to undertake one or more of the following activities related to interoperability testing:
    - Participation in one or more industry test events (i.e., (e.g., 2Q2008 FSAN event)
    - Private Testing - Provide a statement of interoperability achievement through private testing
  - **Integration Testing** – A staging event will be held just prior to NXTcomm (tentatively beginning Thursday 12-June) to perform integration testing of the G-PON equipment and the supporting datacom and service node equipment. G-PON interoperability testing is not the focus of the Staging Event

# NXTcomm 2008: High-level Timeline



wo = week of

# Demo Groups - Development Process



In parallel with this process the details of the demo architecture will be determined. Including the nature of traffic segregation and COS within the demo, Service Nodes details, etc.

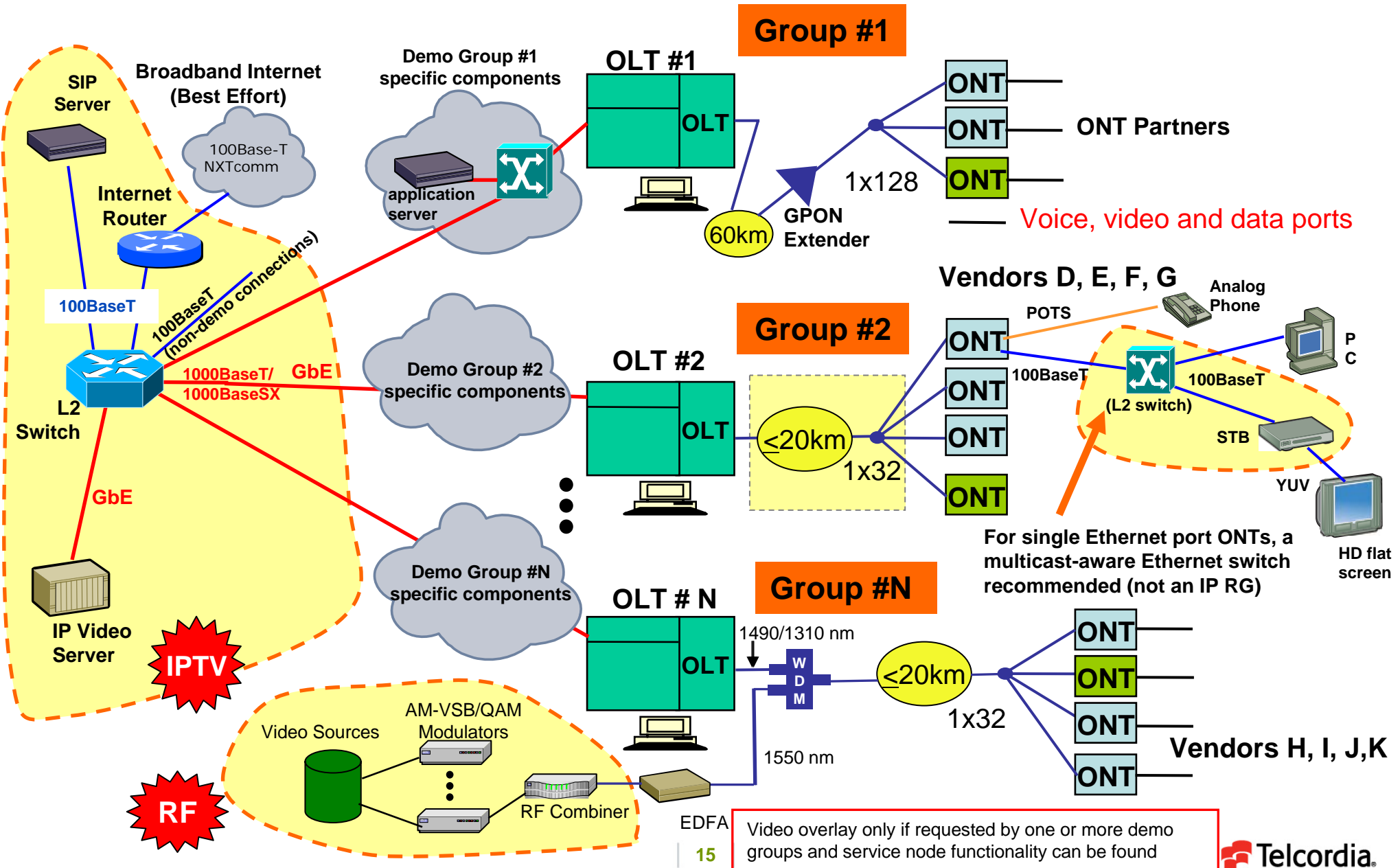
## ■ ITU G-PON Pavilion – *Key Dates*

- **Feb 18 (next week): Participation Agreements Distributed (Telcordia)**
- **Bi-weekly in March, weekly beginning April**
  - **Tuesdays proposed (FSAN OISG calls are on Wed)**
  - **11-Mar and 25 Mar conference calls, @ 14:00 UTC**
- **Week of 3-Mar: Equipment Questionnaire Distributed**
- **14-Mar: Questionnaires Returned**
- **Mar 21: Participation Agreements returned to Telcordia**
- **Mar 28: OLT Leads Identified**
- **Apr 11: Demo Groups finalized**
- **Apr 11 through Jun 1: Demo Group interoperability testing**

# G-PON Interoperability Showcase Demo

the elements of success

## High-level Example



Video overlay only if requested by one or more demo groups and service node functionality can be found

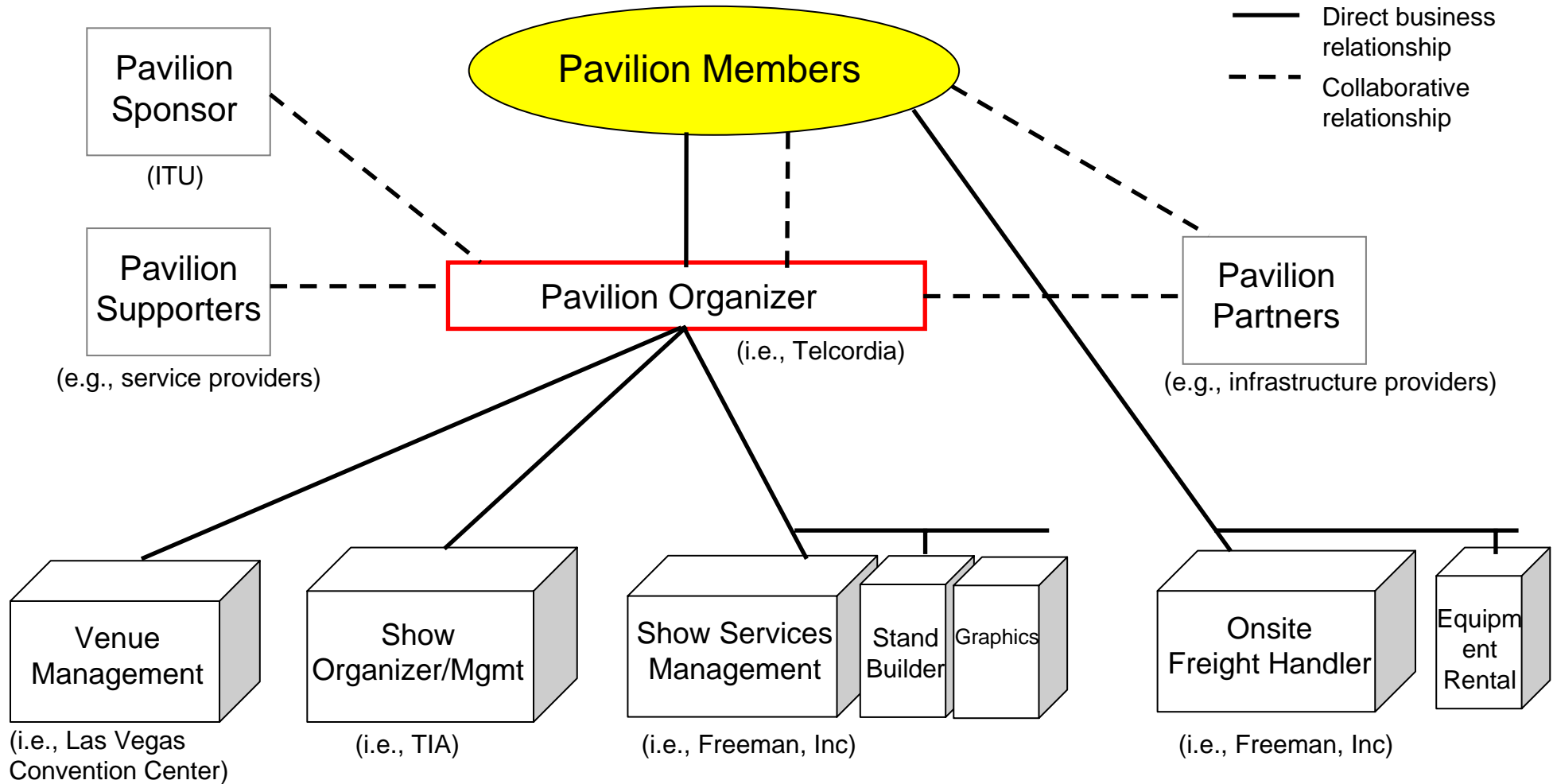
- ■ ■ **OMCI Support – *How Important?***
  - What about OMCI Support? Is complete OMCI functionality in support of the services and functions being demonstrated required?
  - Recall showcase objective from “Guiding Principles”
    - “**Overall Objectives** – demonstrate the relative maturity and interoperability of G.984 compliant G-PON systems by delivering voice/video/data applications in a mixed G-PON vendor environment.”
    - Given this objective, it is strongly encouraged that interoperability at the OMCI layer be provided to support the services and functions being demonstrated
      - OMCI “workarounds” are strongly discouraged for system vendors
      - The use of locally issued ONT configuration commands or scripts should only be considered for device vendors using reference design boards

## ■ ■ ■ G-PON Pavilion – *Next Steps*

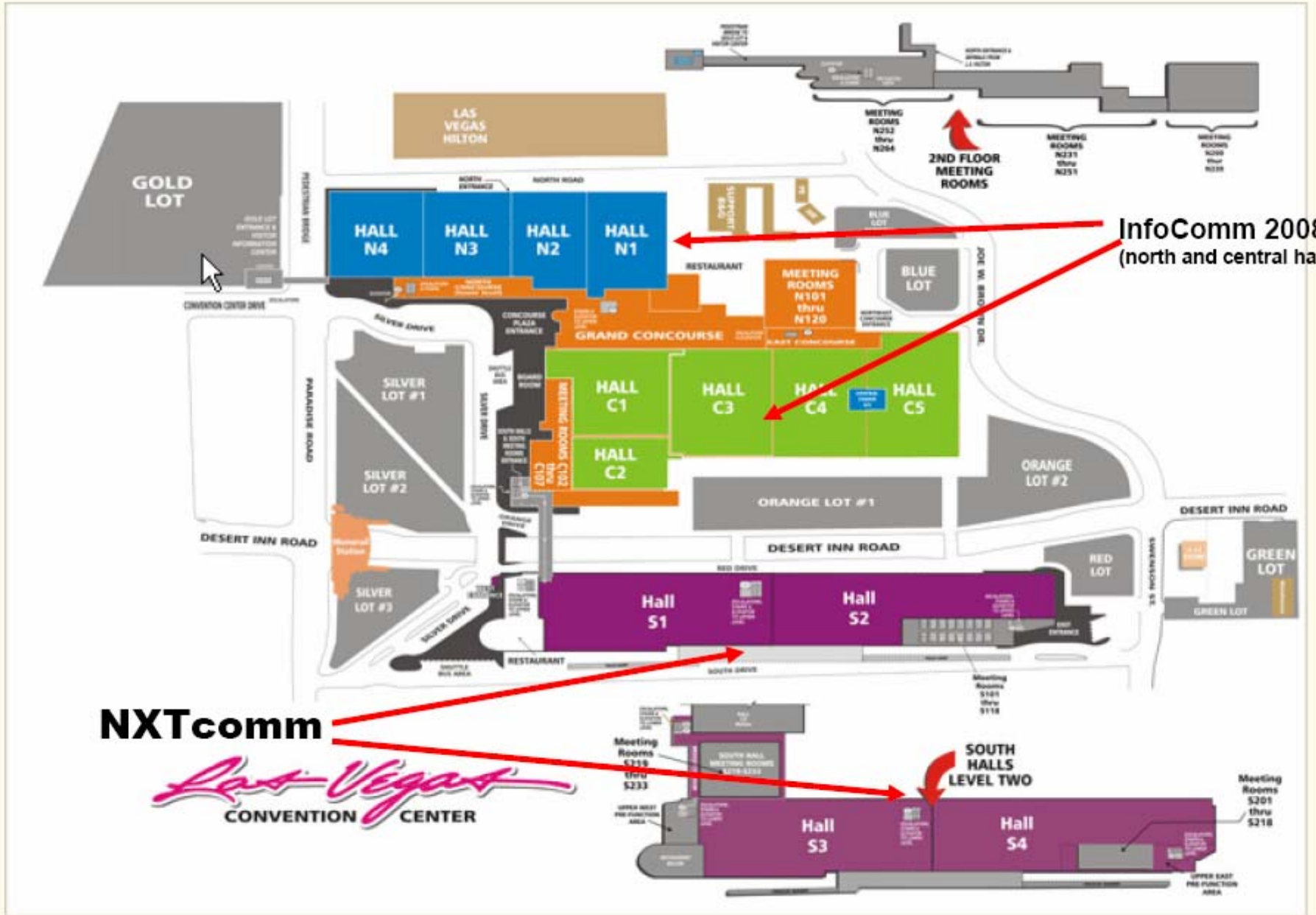
- Conference Call Schedule
  - Bi-weekly in March, Weekly beginning April
  - Time for call: 14:00 UTC (late evening in Japan, early AM West Coast USA)
- Next Conference Call: March 11 (Tue)
- Conference Call Agenda: Will be centered around reviewing Living List items
- Website: [www.telcordia.com/services/testing/integrated-access/g-pon.html](http://www.telcordia.com/services/testing/integrated-access/g-pon.html)
  - Repository for important planning info
  - Member-only page pending

# Reference Material

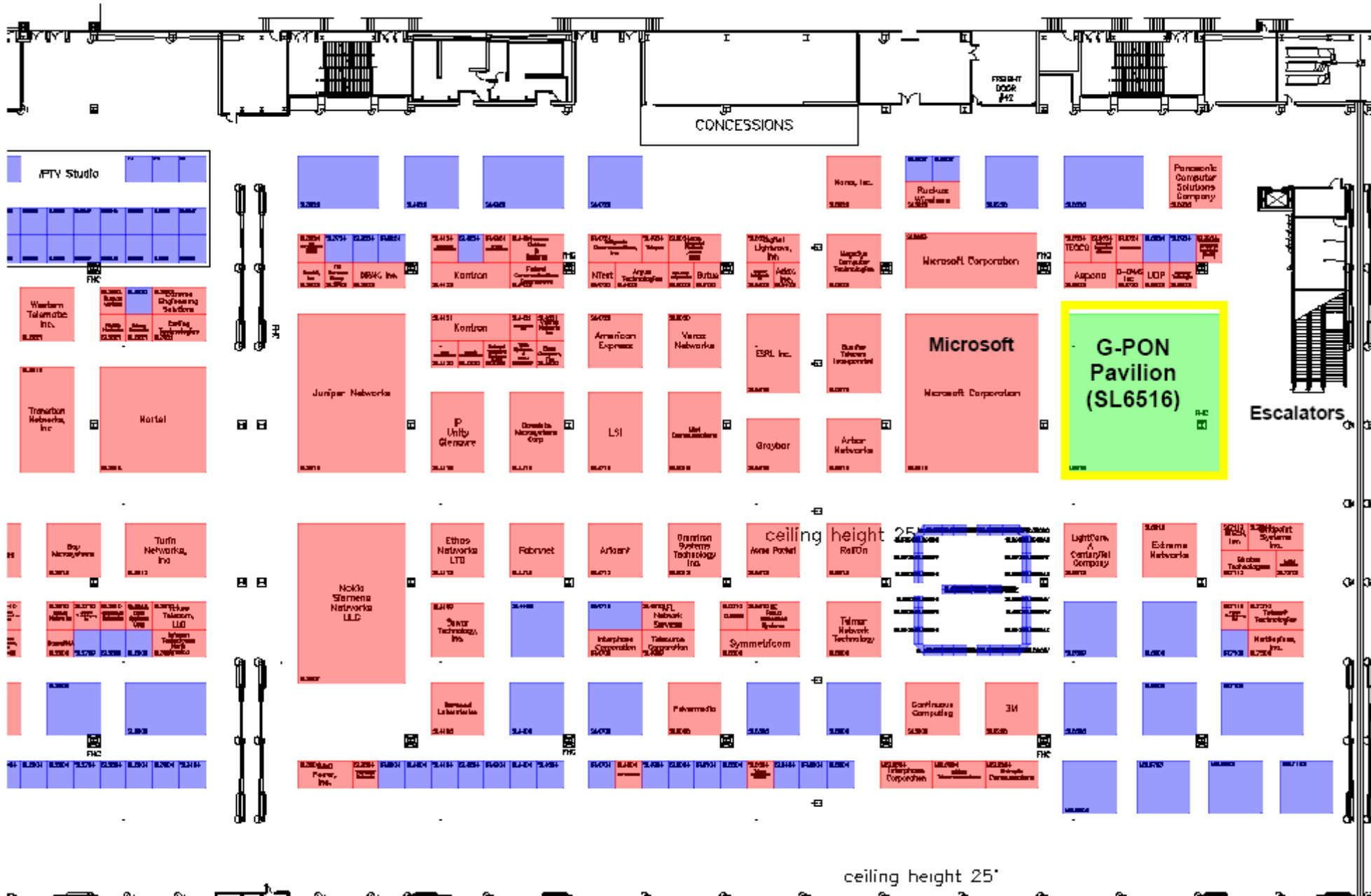
# Business Entities and Typical Relationships



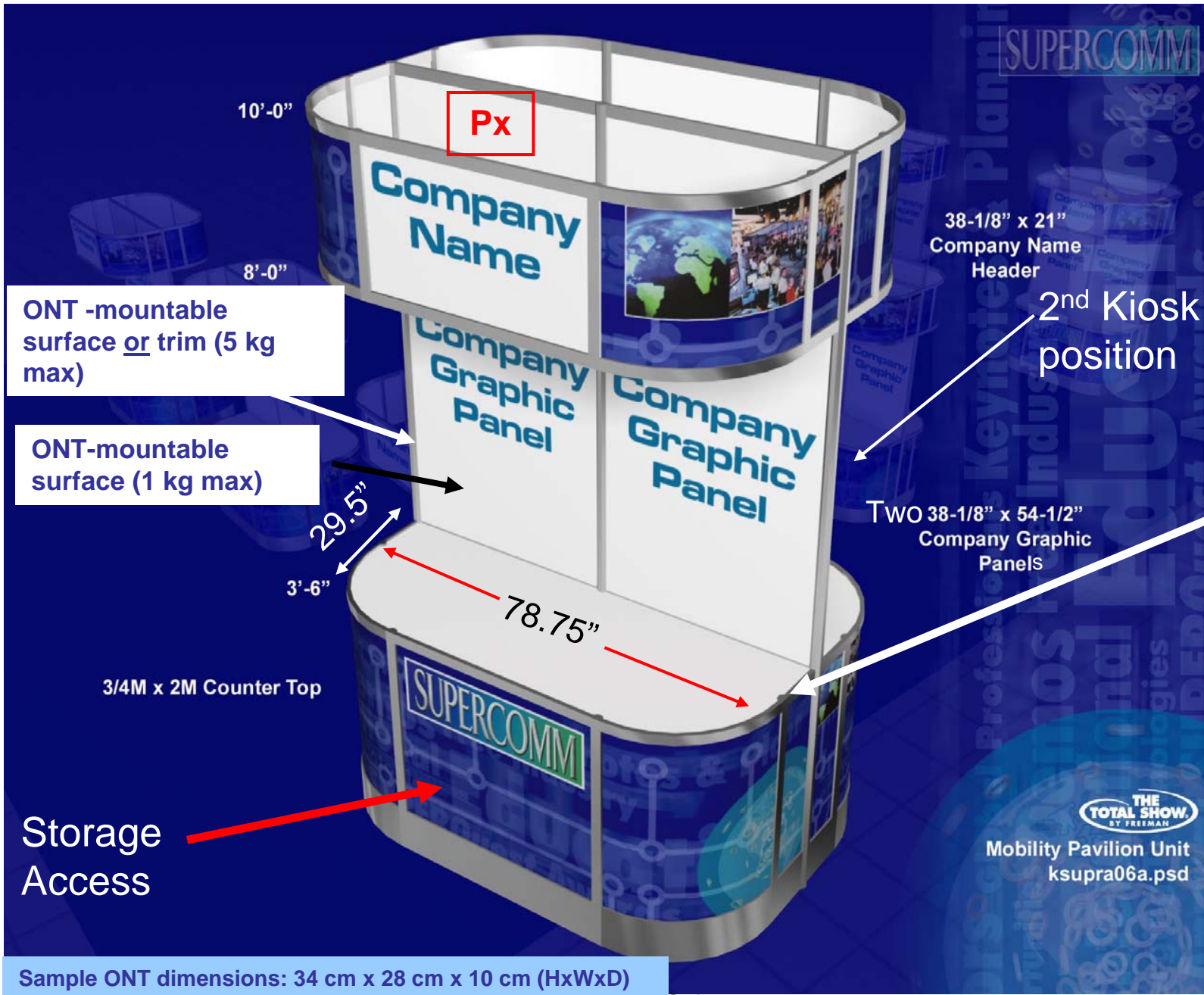
# Las Vegas Convention Center Site Diagram



# Proposed Location of ITU G-PON Pavilion at NXTcomm 2008 (Hall S1)



# Pod - Kiosk Position Detail



## ■ ■ ■ G-PON Pavilion – *Equipment Needs*

- Data Communications Aggregation Network Functionality
  - Carrier-grade Ethernet switch, IP router with DHCP functional (Internet Access)
  - Lacking an industry partner Telcordia will provide, but may not be carrier-class equipment
- Video Service Node <Falcon IP tentatively to provide>
  - IP Multicast Video Server and STBs (along with associated application middleware server function)
  - Licensed HD Video content
- Voice Service Node <default will be an Asterisk SIP server>
  - VoIP server/call agent (SIP or H.248)
- TDM Gateway (if TDM service included in Demo)
  - Ethernet-to-DS1/E1 gateway required if OLT does not provide this functionality
  - Must match TDM transport method being used by ONTs

Pavilion Members and Supporters are encourage to propose solutions for each of these needs