

REQUEST FOR WORKGROUP CHARTER APPROVAL

Proposed Workgroup Name: Fiber to the Room Workgroup

Check one:

- Recharter of existing workgroup
- New workgroup

Interim Chair/Co-Chairs: Greg Dawes (Zhone) & Dave Cunningham (Corning)
(permanent chairs will be voted after the first or second workgroup meeting)

Date of Request: 08 August 2012

Requested Charter Length: 12 months
(charter duration begins the day of first officially posted meeting)

Business Problem Statement

In a *maximum* of two or three sentences, describe each **business problem** that the workgroup will address.

With an abundance of emerging technologies, new applications and demand for seemingly unlimited bandwidth, hoteliers are challenged to design and implement an infrastructure to meet the growing demands of guests, staff and visitors. Hoteliers have extensive experience with CAT5, CAT5e, CAT6 and COAX infrastructure, as well as limited experience with fiber in the riser. However, there is a growing perception that these options will be insufficient, not to mention costly, to support the growth of data, mobile and future unknown applications. As a result, hoteliers are eager to explore next generation infrastructure options, such as fiber to the room, but they lack the necessary understanding and guidance to evaluate and plan deployments.

Proposed Solution

Describe technology products or services, *not available today*, that address the business problem stated above and that hotels will be able to purchase from the vendor community when (or soon after) the project is complete. Or, if the products or services are available today but without certain features or capabilities that you plan to deliver, identify those features or capabilities.

A series of deliverables that describe how to effectively deliver and deploy Optical Fiber infrastructure and related technologies to and within a hotel. The deliverables will cover:

- Fiber 101 - Overview document to give an understanding on the material and its capabilities.
 - Optical fiber cable and connectivity options
 - Current network technologies utilizing optical fiber
- Passive Optical Networks (PON) 101 - Overview document to -give a more detailed understanding on the electronics behind this technology.

- Design Guide for:
 - LAN bandwidth calculator
 - New builds
 - Retrofits
- Executive summary document for CXOs
- A series of 2-4 webinars to provide an introduction to the various topics, appropriate for field IT personnel, and making them aware of other resources (including the documents above)

Briefly describe the end result of each anticipated phase of the project (including at a minimum, a first phase, which should generally be no more than six months).

Phase	Months after approval	Description of End Result
1	3	Fiber 101 Best Practices + Webinar
2	6	Passive Optical Networks 101 Best Practices + Webinar
3	11	Fiber to the Room Infrastructure Design Guide <ul style="list-style-type: none"> • LAN bandwidth calculator • New builds • Retrofits
4	12	Executive Summary for CXOs

Meeting Plans:

How frequently does the workgroup plan to meet (for example, weekly by webconference plus face-to-face 3x per year)?

Initially, the group will meet by teleconference every other week to form sub-teams and assignments. Once sub-teams are formed, they will meet independently and the whole group will meet monthly for status updates and administration.

The group will also meet face-to-face at Infrastructure and Device Forum meetings in North America and possibly Europe if enough interest warrants a meeting in that continent.

Coordination:

Identify potential conflict or overlap with any HTNG specifications (published and under development) and this workgroup’s anticipated plan for achieving resolution.

There are a number of HTNG documents which were created as research and back-up documentation in the Cellular Coverage Workgroup which could be repurposed. Currently, there are no active workgroups working in this space but we will coordinate with any future workgroup(s) to ensure that they understand how the output generated by this workgroup may be leveraged.

The team does not believe there will be any conflict or overlap with any relevant external specifications (published and under development) and this workgroup's anticipated plan for achieving resolution.

Most of the reference material we use will be specification based, including:

- Cable Standards
 - BICSI
 - TIA
- GPON Standards
 - ITU-T G.984.1-7 (GPON)
 - ITU-T G.987.1-3 (10GPON)
- EPON Standards
 - IEEE 802.3ah (EPON)
 - IEEE 802.3av (10GEAPON)
- DWDM PON Standards
 - ITU-T G.694.1 (DWDM Frequency Grid)
 - ITU-T G.652 (Characteristics of Single Mode Fiber)
 - ITU-T G.698.3 (DWDM PON at 1.25 Gbit/s with 100-GHz channel frequency spacing)
- Relevant standards and specifications published by:
 - Wireless Service Providers
 - 3GPP Standard
 - Telecommunications Industry Association (TIA)

There is no direct conflict with these specifications/standards bodies, but there is work going on that there that is relevant. Dave Cunningham is involved with BICSI and TIA and plans to be the liaison. The Best Practices and Design Guide will leverage existing published standards are not intended to conflict with any of the existing, related standards referenced above.

Regional Coordination

Is the project applicable in multiple world regions? Describe steps taken to ensure that regional issues are represented, including engagement of members from other regions, review by regional advisory councils, etc.

This project is applicable in multiple world regions, as it applies in any part of the world where fiber is a viable option. However, the result will be most robust for the geographic areas that are best represented in the workgroup. We believe, with minor modification, the output will be adaptable for other global regions and we will encourage participation from APAC and EMEA from day one. We will also keep a repository for any region/country-specific issues, which can live on and continue to be updated after the workgroup has completed the chartered work.

Participation

Identify the categories or characteristics of hotel companies, technology products, and technology services required to collaborate in order to address the business problem (e.g. PMS, set-top box provider, etc.).

- Fiber providers
- Low voltage contractors
- DAS Equipment vendors
- PON vendors
- Hoteliers with new builds and/or retrofit projects that involve the consideration or direct use of fiber technology

Separately list others that, while not required, would be desirable.

- Mobile Network Operators
- Wireless Consultants
- Hospitality Technology Consultants
- IPTV vendors
- IP PBX vendors

Identify companies and individuals who have agreed to participate in the workgroup. The following vendors intend to develop their products to the workgroup output and the following hoteliers, as buyers of hotel technology, intend to adopt the workgroup output.

Company	Individual	Confirmation
White Lodging	Ken Barnes	YES 7-24-12
CISCO	Bill Gustafson	YES 7-23-12
AT&T	Mark Compton	YES 7-23-12
Corning	Dave Cunningham	YES
Engineering Plus	Jim McGlynn	YES 7-23-12
Enseo	Dayna Kully	YES
Firmdale Hotels	Mark Rupert Read	YES 7-23-12
Hyatt Hotels Corporation	Armand Rabinowitz	YES 7-31-12
Mandarin Oriental Hotels	David Heckaman	YES 7-23-12
Marcus Hotels	Peter Engel (probably more of a Business Advisor role) and Matt Tarasewicz (workgroup participant)	YES 8/7/12
Marriott Hotels International	Dick Wagner	YES
Maybourne Hotels	Ralf Balzer	*Ralf is interested, would just like to be kept up-to-date; perhaps he will be business advisor to the workgroup
NPI	Jeff Cook	Yes 7-26-12
Omni	David Jackson	Yes 8/6/2012
Ruckus Wireless	Matthew Fitzgerald	Yes
SOLiD	Ken Sanfeld & Saeed Anwar	Yes 7-25-12
Starwood Hotels and Resorts	Kenn Isakson	Yes 7-25-12
Windstream Hospitality	Don Jensen	YES
Zhone	Greg Dawes	YES
The Conceptual Group	Fraser Hickox (Business Advisor)	YES 8-3-12
Warwick Hotels	Myles Foster	YES 8-2-12

Project Plan

Please provide a detailed project plan for the first phase of the project, through the first deliverables milestone. Indicate time in weeks from project kickoff.

Please note that some of the deliverables overlap. It is the intention of the workgroup to form a few teams to work on each of the main deliverables simultaneously.

Weeks	Milestones / Deliverables
6	Fiber 101 Best Practices Deliverable What is it? How does it work? Fiber types Fiber performance Benefits Begin planning fiber webinar(s)
12	Fiber Optic Cable 101 Best Practices Deliverable What is it? Cable construction Pulling best practices Fiber Optic Termination Methods Installing Fiber Optic System (components of an installation) Finalize webinar(s)
30 2 4 8 10 12 16 18 20 22 24 30	PON 101 Best Practices Deliverable Develop a glossary of appropriate terms for the project Types of PON PON details PON deployment types PON components Network diagrams Copper to PON comparison - components Copper to PON comparison - power Copper to PON comparison - space Plan PON webinar Finalize PON webinar
44 14 18 20 22 24 26 30 32 34 36 38 44	Fiber to the Room Infrastructure Design Guide Deliverable Develop a glossary of appropriate terms for the project Prepare a framework of important elements - Best Practice Fiber Guidelines aligned with unique Hotel cabling environments Design and Installation Considerations - Punch List Fiber Mediums, Receivers, Transmitters, Transceivers Engineering Fiber to the Edge Exploded Diagram(s) - Hotel Cross-Section Fiber to Gigabit Ethernet Comparison Optical Fiber Connectors, Patch Cords, TE's Standards, Regulations, and Organizations Create LAN Bandwidth calculator Plan design webinar Finalize design webinar
52	Executive Summary for CXOs