...Networks Made Simple

Podcast #1

GETTING TO KNOW MENARA NETWORKS

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Host: Amber Freeland

Guest: Adam Hotchkiss

Episode Outline

Intro monologue and jingle: **2:00**

> The podcast will begin with a short 30 second Menara Networks introduction. Amber will open the podcast with a description of the episode topic and a brief summary of each topic. Amber will also welcome the episode's guest, Adam Hotchkiss, as well as the audience to the show.

Topic 1:   Who is Menara Networks?   **3:00**

> Amber will start the show describing Menara Networks and where they are located.

Topic 2:   Explain the OTN-XFP   **4:00**

> Amber and Adam will talk about the OTN-XFP transceiver. They will discuss what it is, how it is different from all of the other XFPs out there, and how it is different from their competitors.

Topic 3: Upcoming SCTE CableTec Expo 2011   **3:00**

> Amber and Adam will talk about their upcoming appearance at the CableTec Expo in Atlanta, Georgia. Adam explains the importance of the event and discusses what their booth exhibit will be demonstrating.

Topic 4: Future of Menara Networks TIME   **1:30**

> Adam discusses what the future has in store for Menara Networks and the technology his company is producing.

Closing: **:30**

INTRO: BEGINNING MONOLOGUE   2:00

Start 15 second jingle music

AMBER: Hello and welcome to the first podcast by Menara Networks. I am your host, Amber
            Freeland, and today we are going to sit down with one of the vice presidents of Menara
            Networks and get to know them a little more. Today's guest is Adam Hotchkiss. Adam is
            the Vice President of Product Line Management for Menara Networks and brings more
            than a decade of experience in the definition, launch and support of
            telecommunications and data transmission systems to interchange and local exchange
            carriers. Prior to Menara Networks, Adam served as Product Line Manager for WDM
            Systems at Qtera Corporation, which was acquired by Nortel Networks in 2000. In his
            role with Qtera and Nortel Adam served in a senior position responsible for the
            definition, requirements and architecture of WDM transport products, which led to the
            successful launch of two generations of WDM platforms including the industry's first
            ultra-long haul 10G WDM system. Prior to Qtera and Nortel Networks, Adam served at
            Fujitsu Network Communications where he was responsible for the launch of Fujitsu's
            first WDM system and the support for SONET access and core infrastructure products
            and networks. Adam, welcome to the show.

ADAM: Thank you. It's good to be here. Thanks for that introduction. You make me impressed
            with myself for a minute.

Topic 1:   Who is Menara Networks?   3:00

AMBER: Well you have done some impressive work in the world of networking technology. Okay,
            so tell me a little bit about Menara Networks. Who are you guys?

ADAM: Okay. Menara Networks is a telecommunications company located in Dallas, Texas.
            We've been here since 2004, and we build telecommunications equipment to connect
            internet routers together through optical interfaces.

AMBER: Okay. I'm following.

ADAM: And our main objective as a company is to design and develop our own hardware to
            enable telephone companies and cable TV companies and internet service providers to

	connect their routers together across long distances using fiber optic cables at the lowest cost possible.
AMBER:	So you are the vice president of product line development. What exactly does that mean? Can you explain your role a bit for us?
ADAM:	I define the products that we're going to build in the next one to two years. So I talk to the customers, I gather requirements on what products they like to see, and then I go back and I define what the product looks like, how it works, what equipment it works on, how much it costs, and how much time will it take to build what we need and then hand that over to the engineering team.
AMBER:	Okay. So you -- you handle all the setup and the -- I don't know, the organization of it, but you're not one of the actual engineers?
ADAM:	No. I define everything that needs to be built on the product. And it's my responsibility that when we actually build it, that it works the way I defined it and that the customer will actually buy it.
AMBER:	So who are – your customers?
ADAM:	Well I can't tell you that. It's classified.
AMBER:	Like CIA "I could tell you but then I'd have to kill you classified?"
ADAM:	Not exactly. It's more like "If I tell you then I could get fired, or sued for violating the confidentiality agreement, or both."
AMBER:	Well you don't have to tell me specific company names, but tell me a little bit about who your customers are.
ADAM:	So we sell to several of the cable companies in the U.S. and we sell to the largest cable company in the US, but we haven't announced the name. We are also in Europe; we sell to one of the largest carriers in Russia and one of the largest carriers in the UK. And we have several smaller customers around the world.
AMBER:	Sounds like you get to travel quite a bit with that then?
ADAM:	Yeah; it takes quite a bit of time away from my life and my wife and my kids, but it's not so bad.
AMBER:	Oh, okay how many kids do you have?
ADAM:	I have two kids.
AMBER:	How old are they?
ADAM:	11 and 14.

AMBER:	Okay. Do they ever get to go on these trips with you?
ADAM:	Not really.
AMBER:	What about your wife?
ADAM:	The wife will go sometimes when -- when she's been neglected for too long, but otherwise, it's just me. These trips are usually one day, one city, one hotel, and then repeat five days in a row, so there's really not much time to do much else.

Insert 10 second jingle music

Topic 2:   Explaining the OTN-XFP   4:00

AMBER:	Okay. Well, so what exactly is your primary product that you guys sell?
ADAM:	So our primary products are what we call optical OTM transceivers and we have several different varieties of those transceivers called XFPs and XENPAKS and 300-pin, and these are all kind of foreign terms to most people but these are industry standards sort of like if you have a USB flash drive you plug into your PC, we develop something similar to that that plugs into the router. Everything is standardized and interoperable between all the router vendors and we design to those standards.
AMBER:	Okay. So what exactly is an XFP? What is that? What does that mean for those of us who are not in the know about networking technology?
ADAM:	So the XFP, the X stand for ten like the Roman numeral, so that denotes the speed. It is ten gigabits per second or 10 billion bits per second. And F and P, F means form factor and P means pluggable. So it is a ten gigabits per second pluggable form factor module that we plug directly into the router that converts the information. The router then gives that information to an optical interface to connect to the fiber optic cable that connects two routers together.
AMBER:	Okay. So what you are saying is that this device, this XFP -- this replaces the router?
ADAM:	This plugs into the router.
AMBER:	Plugs into the router, but replaces the transponder?
ADAM:	Yes. Typically the optical interface that plugs into the router is not very good; the information it passes on can't travel very far.
AMBER:	Travels, you mean physically covering a distance?

ADAM:	Yes. So what we have done is we have developed a unique XFP, or pluggable form factor device, that plugs into the router that can transmit over very long distances – think hundreds of miles. And we do that by having a high quality optical interface and we also have forward error correction inside the XFP. And those functions allow you to transmit over much longer distances, anywhere from 100 kilometers to 1,000 kilometers between the locations.
AMBER:	So where does the transponder fit into this system?
ADAM:	The transponder is the middle man between the routers that converts the signal.
AMBER:	So if you're talking about a device that is replacing a transponder that is both more powerful, more effective, and more efficient then it must be a lot bigger, right? Where are they going to store this device?
ADAM:	No. Actually, it's about the size of a pack of gum, a small pack of Wrigley's spearmint gum that goes directly into the router.
AMBER:	Really? It's that small? I can't believe it.
ADAM:	Believe it. From a size perspective, our device is probably about 90 percent smaller than that transponder. And because our XFP transceiver is so small, it consumes a lot less power as well.
AMBER:	Oh, wow. So there's a significant energy savings for businesses that switches to this?
ADAM:	Right. And it's very important and critical to our customers that we try to save them power because a lot of the data centers or offices that have this equipment are very short on power and you just can't call the electric company and get more power. It's a process that takes six months to one year complete so any amount of power they can save is very important to them.
AMBER:	And I would imagine that if you're talking about replacing a large piece of equipment with something much smaller then that would save on leasing space in an office building, right?
ADAM:	Right. A lot of these offices can support only a very limited number of equipment racks to put their routers and other equipment into. So any space we can save allows them to put in more routers and more equipment to service more customers. So we're not only saving them a significant amount of space, we are also allowing them the opportunity to grow more in the future.

AMBER: Okay. So that's the XFP, but you had mentioned earlier a device called the XENPAK. Can you tell me a little bit about that?

ADAM: XENPAK does the same function, but it's a larger size and takes up a little bit more power. So the XENPAK was what we call a legacy piece of equipment meaning it was developed in the past and has now been superseded by another technology. But when these operators purchase their routers, they invest tens or hundreds of millions of dollars into the router platform. It takes about ten years to use up all those router slots and interfaces. That's why there's a lot of XENPAKs still out there, because it's a ten-year cycle they have to work through. But when they purchase new equipment, they move to the latest and greatest available and that's our OTN-XFP today.

AMBER: Okay. Well, speaking of the XFP, you're not the only person who makes an XFP. So how is your product different from your competitors that are out there?

ADAM: There are roughly ten or so companies that build these optical interface modules. But the difference between them and us is that we provide the very highest quality optical performance and also the forward error correction inside our XFP itself and nobody else can duplicate that in the industry. And the only reason we're able do that is we have our own silicon chip design team and we fabricate our own chip to put inside the XFP to handle these functions that nobody else has.

Insert 10 second jingle music

Topic 3:   SCTE CableTec Expo 2011   3:00

AMBER: Okay. Well, so I've heard that you guys are going to this SCTE conference in Atlanta in November. What is that?

ADAM: SCTE is the Society of Cable Technology Engineering Group, and there's a show called cable tech which is a technology show for everybody in the cable industry. Cable industry means companies like Comcast, Time Warner Cable, Cox, Bright House; these are all cable companies in the United States. Everybody will converge on this conference to learn about new technologies in the industry.

AMBER: So what is your role? I mean, why are you guys participating in this? What are you hoping to get out of it?

ADAM: In the cable industry, all the networks are built upon IP routers. We are talking about all of the video today: video on demand, all the cable modems going to your house. All of these technologies are carried over IP routers and we develop the optical transceivers that plug into those routers to connect them together. So our part is very applicable to because we connect these internet routers together for the cable companies.

AMBER: Now you submitted a paper for this. Are you planning on presenting that?

ADAM: We have a joint paper with Comcast and Comcast is presenting it. They're our customer and that's why they are presenting the paper, but we will have a paper shown two times on Monday and Wednesday during the conference highlighting our technology and how we deployed it with Comcast and their network.

AMBER: And I heard that you are doing some sort of a live product demonstration. What exactly are you going to be doing there?

ADAM: We'll have a live product demonstration with Juniper Networks, who is a very large router vendor to the cable companies, and we'll show our products integrated into their router platform carrying live video streams across the router platform. So we're doing a live demonstration of how our product is actually deployed in the network.

AMBER: Very cool. Well, that sounds pretty exciting. Do you go to a lot of events like this?

ADAM: We show our product at roughly three to four events per year and we attend maybe double those events just as attendees to talk to customers, so may be overall a half dozen to eight conferences a year.

AMBER: But is this the biggest one that you guys participate in?

ADAM: This is the second of two large conferences. We have one geared toward the cable industry, which is SCTE, and then we have one geared toward the telecom company, which is called OFC, and that one's held in March.

Insert 10 second jingle music

Topic 4:   The future of Menara Networks   2:00

AMBER: Okay. Well, are you guys working on anything else? You talked about the XFP and how you have sort of redone the XENPAKs, but do you anything else anything on or anything -- any buns in the oven so to speak?

ADAM: Like any technology company, we have to move on to the next latest and greatest technology every few years and we're working on two things. First we're working on a product called the XFP plus, which is a even smaller and even lower powered design; exact same function, but far less space and power. That allows our customers to pack even more interfaces, save more power and more space. The second thing we're working on is the even higher speed product called the CFP, C being the Roman numeral for 100, which means we'll support 100 gigabits per second or hundred billion bits per second speed; and that's ten times faster than what we're doing now; so we're increasing the speed by ten times. It's a pretty aggressive product that we're working on.

AMBER: Oh, wow. Well all of that sounded really exciting. That sounds like it could really change the face of network technology and save both your customers and their customers money if these devices are installed across the networks.

ADAM: We certainly hope so and we hope our technology will lead to even faster connections to the home to support high definition video, video streaming over the internet, and enable everybody to have high speed internet access at their home at an affordable price.

AMBER: Well, thank you so much for coming and speaking with us. I really appreciate it and I know our listeners appreciate it as well.

ADAM: Okay. Thank you, Amber.

AMBER: Tune in next month when we recap the trade show in Atlanta and discuss all the exciting innovations presented at the show and how this affects Menara Networks.

Start 15 second jingle music and fade out.