NAME	89 coordinating 1.9 gHz comms questions	answer time into video
Gee Edwards	with multiple Artist Frames linked together over Fiber trunking in a large space with spaced out antenna and frame what is the audio latency and handoff lag between systems when they trunk together as one seamless wireless coverage across multiple sites.	0:37:34
Harry Brill	I have a basic question. I have been told the Bolero antennas are directional. Can you all discuss that? I have had 3 shows with only Bolero and its been great. Have interfaced with Unity to another site also running all Bolero. Worked flawlessly.	
Gee Edwards	typicle larger corperate show up to 75 wireless packsg	
Michael Pacitti	30-40 RF wireless packs	
Steven Voytac	In my usual corporate gigs, its roughly between 2:1 wired to wireless all teh way down to no wired and all wireless. Usually less than 25 RF beltpacks though	
Matt Salerno	We recently did 2 major TV productions where everyone was on wireless Bolero, 80+ packs, no panels.	
Phil Ingle	I'm at the Zoellner Arts Center. We use 6-7 Bolero beltpacks just for our house crew and then usually 3-4 Bolero beltoacks for the tour company. We also have intregrated wired clear-com to the tune of 10 beltpacks at any given time.	
Mark Montgomery	Packs/panels varies a lot in terms of ratio... But I know that I'm a lot more comfortable giving a Bolero to a user in a pinch now rather than a panel. Before Bolero and the stability it provides I definitely preferred having more panels and using wireless as a last resort.	
Carmeron Stuckey	Sure, what is DECT? But really, what is the PCS Guardband?	
Claudio Corcione	Is it possible to lower the power individually on the antennas?	
Jeff Welton	Need to have Antenna power adjustable as per antenna basis. When will that be avalible?	
Caleb Cassler	RE: Single Bolero Antenna can clock up to 32 devices. Does this completely fall apart at 33? Does having more antennas change this number?	0:42:38
Jeff Welton	Can GPS synced PTP clocks work for syncing up two systems? Do they sync the same?	0:42:33
Mark Montgomery	When I am testing wireless range I usually will play music from an Artist frame and listen to the audio quality on a Bolero but I am only testing Bolero RX audio. Pete's method of talking and listening on two packs is more effective (TX + RX). But I'm curious if there's a difference between TX & RX. Is my "listen-only" test getting less accurate results since I am not also testing Bolero TX?	
Caleb Cassler	Best way to clock sync disparate systems? Just being on the same switch network?	0:43:21
Victor Lang	how do you think of 3 party - like Sennheiser AVX Dect microphones. - moving around in your coverage area.. - ofcourse some antenne will not see that AVX - but how will it affect time slots?	
Eric Pierens	From the Netherlands: Is Bolero compatible in a DECT2020 environment ?	
Victor Lang	how will 5G mobile antennea effect the Dect band - i have hear problem that it can totally overload the dect band?	
Ike Zimbel	Can you share clock with 3rd party systems?	0:43:21
Katiene Norton	Can you explain PTP? about the multipath tolerance, will the audio drop on the belpack? how long can be the drop out?	0:46:45
Dave Schwarz	If 2 systems are not connected to each other but both GMs are locked to GPS, is the freq coord good enough?	
Mateusz Kaluza	a single bolero antenna can clock up to 32 devices on a Network (panels, Cards, Antennas) - What's going to happen if there's only one bolero antenna in the network and 8 aes cards (10 bolero ports and 52 keypanels) and this antenna is set to master?	
Phillip Renault	I dealt with a trunked system from LA to Kodiak to Mojave all PTP synced at 32ms latency.	
Joe Cassenova	What do you think of the new 2.4MHz Bolero? Do you foresee any issues using it? Or do think its okay with more devices going to 5G.	0:52:41

Fernando Delgado	how would I clock a standalone system?	
Tim Kepner	In a given area, ie. 300' x 300', and with ten antennas, how does one obtain 100 beltpacks working simultaneously with only 50 Dect timeslots available in that given area.	0:48:55
Claudio Corcione	Is it possible that an AES67 Artist card act as as Master clock instead the Antena when we have bolero in integrated artist mode?	
Juan Gallardo	Can you talk about the math that goes into calculating how many followers an external clock leader can manage?	
James Hunt	with a high quality master PTP clock, do we still want to limit the network to 3 spans wide?	
Jean-Sebastien Roy	For a mid size system, like a 1024 system with around 50 boleros, 30 12xx panels etc, what would you recommend , a ptp grandmaster or a simple boundary switch?	0:48:55
Eric Pierens	We had problems with Drones (DECT using) How can we solf that?	
Ruud Boon	What external ptp clock would you advise?	
erik leamy	Installing my bolero system now, 40 antennas all from spine leaf PTP GPS synced. Currently using Crew Com 2.4GHz, and 900MHz, in addition to adding the Bolero 1.9. Anything I should be cautious of or general words of wisdom. Far Field design.	
James Hunt	it's very easy with smart panels and bolero to now go over 32 aes67 devices. IS boundary clock now necessary to achieve going over this number?	
Jean-Sebastien Roy	i can confirm that the 4250's switches are great, using them combined with 9300 catalyst as boundary	
Andrew Monroe	Will there be a hybrid 1.9 & 2.4 antenna?	0:52:21
James Hunt	Where can we find more technical details on how to implement a boundary clock to seperate large systems?	2:02:51
Andrew Monroe	Does the 2.4 Bolero need to be coordinated with 2.4 wifi?	
Francois Bourdua	Are the antennas going to be RED & BLUE @ one point, meaning network redundancy as per ST2110 (-7)?	
Jim Bloomquist	Can the 1.9 Dect systems operate on US and europe frequencies or do you have to have specific antennas for each?	0:56:51
Henry Cohen	2.4GHz Bolero vs WiFi access success is highly dependent on spatial separations between Bolearo antennas & WAPs. Since most WAPs are ceiling mounted and Bolero antennas are mounted just above head level, spatial separation is generally >15db worth.	
Alejandro Rodriguez	Is Mexico one of the countries where you can only use 2.4ghz Bolero? or is 1.9 allowed?	2:01:57
Tony Johnson	So can you do a 1.9 Standalone Master Lic antenna and just add a 2.4 antenna or would the 2.4 also need a Standalone master Lic?	1:00:29
Jason Glass	Since Bolero is inherently encrypted, are there not countries that prohibit all unlicensed RF coms with encryption? Thinking about the Middle East.	1:29:36
Andrew Monroe	Why was the 2.4 band selected vs 5GHz?	1:28:44
Andrew Monroe	Are there variences in RF security between the 1.9 and 2.4 systems? Do both use AES256?	1:28:25
Fernando Delgado	in General, can you use a master clock with a standalone AES mode? is there a way to clock a switch with an external clock like an Evertz GPS master clock?	
Katiene Norton	How can we combine Sistem A and Sistem B?	
Mateusz Kaluza	What clock class UIC-128 Card has?	
Andrew Monroe	Can the Scan data be archived off the antenna?	1:30:28
Andrew Monroe	Will scan data support SNMP for alerting?	
Eric Jeannerat	So I can program off set the clock to my timezone or is always going to record all events GMT	

Henry Cohen	WHOA! 1920-1930 has as it' primary function being the duplex gap for PCS services. It is specifically designated as the spectrum where out of band emissions from downlink block A. It is only because this duplex gap can not be practically assigned to any other licensed service that unlicensed Part 15 operations is permitted. If your close enough to a PCS block A cell site, you will experience perfectly permissible out of band emissions.	1:10:41
wynn johnson	is that 3 timeslots remaining number counting the time slots bolero does not use for hopping or are those included?	
Alejandro Rodriguez	Sometimes I see that warning come up when I turn on all the bp and just leave them all together....like in a pile....once I seperate the bp packs, the warning goes away...	1:26:46
Alejandro Rodriguez	So I guess, dont turn on the packs and just leave them in a pile right?	1:20:35
Fernando Delgado	when you add more antennas did you put the system in low power mode?	
wynn johnson	did you ever find the source of the DECT noise floor breathing?	
Mateusz Kaluza	2 different venues with a dark fiber between them - what would be better solution if we have 2 artist frames. To put both of them at MCR and just use another switch(es) at 2nd location? or place one frame at mcr and 2nd at 2nd location and trunk them?	1:31:34
Jeff Welton	Due antennas also generate noise floor in the DECT space? I think I see antennas on my scan when belt packs are not in use.	
Mateusz Kaluza	From what we see even if you are using radio monitoring on antenna it still can act as ptp master, is that correct?	1:26:57
Francois Bourdua	Are the antennas going to be RED & BLUE @ one point, meaning network redundancy as per ST2110 (-7)?	
wynn johnson	was that stadium near an airport?	1:27:51
Henry Cohen	Could have been the stadium DAS, which was not properly gain staged, having AGC hysteresis.	
Caleb Cassler	So if I'm bringing a medium sized system into one of those poor DECT spaces - say Lucas Oil Stadium - what kind of precautions should I be taking to make sure their 80 beltpacks aren't going to interfere with me?	
Jason Glass	RE: noise floor issue: United States Secret Service or Homeland security. Been there.	
Claudio Corcione	When you are using Bolero in integrated mode with one antenna as PTP master, how do we work the clock of artist itself, I mean all the wired beltpacks have to work with bolero, so we have 2 clocks PTP and word clock for AES3 ...does my question make sense...?	1:34:33
Tom Buckby	When will there be an offline Bolero editor?!	1:54:40
Fernando Delgado	to be clear. If I want to run monitor mode for an entire show I have to dedicate an antenna for it?	1:41:27
James Hunt	Can you reiterate the process of measuring the 15db seperation of bolero net spaces?	
Mateusz Kaluza	Then what would be the pros and cons to have one centralized system, instead of two frames trunked at different locations? It was just general questions regarding ptp, master clock etc. issues	1:37:08
Andy Rostron	With the Stand alone system - can you add an ISO channel / conference (for Belt Pack to Belt Pack only) without using one of the NSA 4 wire ports?	
Fernando Delgado	great!! are monitor mode and scanner are two seperate apps?	1:43:14
Francois Bourdua	Q :Any chance of getting this question answered? Are the antennas going to be RED & BLUE @ one point, meaning network redundancy as per ST2110 (-7)?	1:44:53
Fernando Delgado	and walk test pro is an additional app?	1:47:00
Ruud Boon	Does the monitor mode take any extra power?	1:47:27
Claudio Corcione	Please a didactic example to measure the 15dBm difference for a healthy distance between the position of Antennas..	1:46:05
Mark Montgomery	Is there a downside to running beltpacks in monitoring mode? Battery usage, etc.? Seems like it should always be running.	1:47:37
Caleb Cassler	Walk Test Mode only sees antennas you're registered too, correct? Not someone elses?	1:48:52

Jason Glass	Is there an economical suggestion for Riedel hardware & software that a frequency coordinator can use to monitor a Bolero system when that coordinator isn't the vendor or operator of the system on-site? In other words, can I buy an antenna/transceiver to use as an analysis device, without investing in an operational coms system?	1:50:34
Claudio Corcione	The walk test pro is great...it saved my life on an event were we had an issue wth wired c3 beltpacks and as I had test first that on that area we had atena signal, then as i run with boleros while my colleague was configuring them on my run and we overpass the situation, just because we knew that there was enough signal to use bolero on that palce because the previous walking test...experience...	
James Hunt	Are there any plans to expand the scanner ability to generate a 2D map of a venue?	1:52:40
wynn johnson	is the stand alone app necessary to use the scanner tool?	1:53:45
Fernando Delgado	what are the other apps I can add to stand alone? that i	
wynn johnson	MSRP on the scanner app?	
Dana Leonard	In lieu of an offline editor, possibly add the feature to import a spreadsheet file?	
James Hunt	export a .csv from the antenna in the shop, then edit it, then import the edited .csv	
Jeff Welton	Can you save Scans? Like if I wanted to send them to Riedel for evaluation of an issue.	1:58:57
Jeff Welton	Would Matt like to come to Disneyland in Anaheim and look at a very large Bolero system? I have about 265 packs operating on about 150 anennas on 2 nets.	
Jason Glass	Matthew, how much real-world success have you had in convincing cell operators to correct their errant splatter?	
Henry Cohen	ITU region 1 (Europe is 1880-1900	
Henry Cohen	ITU region 2 (Americas is 1920-1930	
Henry Cohen	ITU region 3 (Asia & Oceana) is 1880-1900	
Eric Pierens	Frequenties worldwide:https://apwpt.org/wp-content/uploads/2022/11/Handout_Version-2022_15.pdf	
Henry Cohen	But these are only the duplex gaps, not what is DECT legal.	
Mateusz Kaluza	What clock class UIC-128 Card has? - Was this question answered? maybe I've missed it :)	2:05:13