

Episode 99 | Will BSS vendor interoperability really work?

Caroline Chappell, ccsquared

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- DR: [00:00] I'm DR and this is "Telco in 20." If you've been hanging around TM Forum lately, chances are you've heard about their efforts to promote the Open Digital Architecture or ODA and their Open APIs. For those of you who live in a hole and haven't been keeping up, the goal of these initiatives is to revolutionize the telecom industry, or at least the BSS/OSS side of telco. The crux of the idea is to standardize all BSS solutions by enhancing vendor interoperability and interchangeability. And by doing these things, we would magically reduce costs and foster amazing innovation across the operator ecosystem.
- [00:47] But the reality is that it's easier said than done. Never mind answering the key question of why would vendors like industry behemoth Amdocs, ever allow this in the first place? Today we're diving deep with an expert who's watched the ODA evolve from day one. Caroline Chappell is the founder of ccquared Consulting and a former principal analyst at Analysys Mason. We're going to dig into the history of the ODA and open APIs, the real challenges operators face when adopting this approach, and why the data layer is key to supporting vendor interoperability. So let's take 20. Caroline Chappell is founder and director at ccsquared. Hi Caroline. Welcome to "Telco in 20."
- Caroline: [01:31] Hi, DR. Well, thank you very much indeed for having me today. I'm looking forward to our conversation.
- DR: [01:36] It's going to be awesome. I'm so excited to have you on the podcast. You've been an analyst in the telco industry for over 30 years, including roles at Heavy Reading, which is the research arm of Light Reading and Analysys Mason, and now you've started your own consulting firm called ccsquared, I assume after your initials.
- Caroline: [01:53] Indeed.
- DR: [01:53] What I do with guests a lot of times is find out how they got their start in telco, and your story has to be one of the most interesting ones. So tell us how you got your start in our fabulous industry.
- Caroline: [02:04] Well, DR, I actually did an arts degree, which was great fun and interesting, but then I emerged from university in a recession wondering how I was going to fit myself for the 21st Century. And oh, how I could get a job that would pay me well

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enough so that I could afford driving lessons, because in the UK driving is expensive.

DR: [02:26] I didn't know that.

Caroline: [02:27] Yeah, kids don't routinely learn to drive at a very young age like they do in the US. So those were the days when companies were so desperate for software programmers that they took anyone and trained them on the job. So that's really how I started in the IT industry. And I must admit, I wasn't very good at programming at all, but it gave me insights into just how poor software development methods were at the time. And I became an analyst to promote the discipline of software engineering and the new, back then, capability maturity model for software development.

[02:59] So I've been through all the software revolutions since including the cloud and DevOps, and over the past 20 years or so, I've been focusing on the applicability of the cloud to the telecoms industry. So that's the focus I'm continuing with at ccsquared, as I think like you do, that the cloud and cloud-based AI will have even more of an impact on the structure of the industry, network architecture and operations over the next decade.

DR: [03:24] Yeah, absolutely. I think it's a super big idea. I like to think I kind of brought it to the forefront of the conversation with MWC21 and CLOUD CITY, and now it's just exploding. I feel like everyone kind of gets it now and the power of the public cloud and certainly programmable APIs, and that's really what I want to talk to you about today. TM Forums DTW was held a few months ago in Copenhagen back in June, and obviously a big focus of the show is the advancement of the ODA, the Open Digital Architecture, and obviously their Open API program. So a little bit of background, TM Forums Open APIs have been around for a while. They were launched in 2016, and they've since expanded to over 70 programming interfaces. TM Forum has also developed the ODA as a blueprint for what they call telecom digital transformation, which is kind of a big concept. What do you think the Open APIs and the ODA are trying to achieve?

Caroline: [04:20] So I think that operators have long wanted to drive composability into their business and particularly into their operations so that they don't have massive integration costs when they come to introduce new features, functions and

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products into their BSS/OSS stacks. And the TM Forum has had a great functional architecture that depicts all those BSS/OSS functions for a long time. But what Open APIs add for me are standardized definitions of the way those functions can plug and play together. And the theory is that if ODA is implemented, operators will be able to build their operational systems from best-of-breed components, swapping them in and out in an agile way to meet new market requirements and take advantage of new innovation.

DR: [05:06] Yeah, and that's a big leap that you could actually do that, that you could take components from different vendors and put them all together in a way that works and it's simple and it's fast and it's obviously cheaper. As you've been working with operators and talking to vendors in your analyst role, what are some of the challenges and problems operators are facing by implementing the ODA and Open APIs specifically for BSS?

Caroline: [05:34] Yeah. Operators, as you know, need seamless end-to-end processes across the BSS such as quote to order to cash. And to support these processes, they either have to integrate multiple disparate systems through vendor-proprietary interfaces using a complex middleware stack, or they buy a vendor pre-integrated soup to nuts BSS. And I think big BSS transformation projects we've seen in the past have favored the latter approach, as it helps operators simplify their BSS and cut those integration costs.

[06:06] But now with ODA, you're asking vendors to open up and effectively dismantle their pre-integrated, end-to-end BSS and turn them from black boxes into modular components with Open APIs so that those components can be potentially swapped out for competitors' components in future. And this is a great benefit for operators, but it's a hard ask of established BSS vendors. So I think a big challenge, and it's always bedeviled the TM Forum really, is how to get its vendor members to support Open APIs at a level that guarantees the interoperability of their products. How do you prevent those Open APIs from being implemented with proprietary extensions that provide a vendor with differentiation? How do you maintain version control over different vendor implementations of those Open APIs? So the integration challenges are still minimized.

DR: [06:57] Absolutely.

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Caroline: [06:58] And at a more fundamental level, how do you ensure that the Open APIs that the ODA defines are not simply lowest common denominator, but support the richness of an individual operator's BSS environment? So I think those are all key challenges, but there's also the skill set challenge. Even with Open APIs, operators need the software skills to work with them. And to be fair, the largest operators are investing heavily in such skills as part of their transformation from telcos to techcos. But the benefits of ODA and support to implement it still, I think, have to be sold to smaller operators for whom the pre-integrated vendor stacks often look more attractive.

DR: [07:38] Yeah. We don't always talk about these challenges. When you go to DTW, it's a lot of rah-rah around the certifications on the leaderboard and this vendor signed up to do it. But I think there's real fundamental computer science challenges when it comes to implementing it. And I think you've highlighted a couple of these issues. I mean, I think the operators having to make the decision, you pointed this out early on, is all about, do I stick with one vendor stack, soup to nuts, but now I am trapped in their walled garden and their consulting fees, but the vendor is maintaining all the integrations between the modules, or do I start to break it up into pieces and now the operator is taking on the challenge of maintaining the integration code and now like you said, keeping all the versions in sync and are we just reverting to the lowest common denominator? I love that idea.

[08:30] But we're in control of a lot more and we can break it into the modules. So I think those are some really good deep questions. That's a big trade-off, that's not an easy answer, and not necessarily a two-way door. I also think there's a deeper problem that we don't really talk about as much, at the data layer, the way that different vendors store and architect the data model for their respective products, even though theoretically we're breaking up the components to use best-of-breed from all the different vendors. Isn't the problem really at that data layer to support the idea of interoperability? What do you think about that?

Caroline: [09:10] Oh, I think you're spot on, DR, because actually I think the data layer even more than standardized APIs is key to the future of telecoms operations. I mean, APIs are APIs. They can be open, but they don't have to be standardized. I mean, Google Maps has a different API from Apple Maps, but developers cope with the difference. They're all just APIs. But having a common

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data platform is critical and more than ever in the age of AI. Operators, as you say, they've got so many data silos and unless they open them up, it's going to be difficult for them to apply AI including GenAI in any kind of meaningful way.

[09:45] And to be effective, you think about customer service chatbots, for example, they need access to a wide variety of data including network data, both for training purposes and for inferencing when resolving a customer problem. And according to research we carried out when I was still at Analysys Mason, apart from the very largest operators, most still have a problem with data that's embedded in different vendor products and no overall data modernization strategy. So you need to kind of extract that operational data from source applications and hold it centrally if you're to become data and AI driven. And interestingly, actually in a timely way to your question, I was listening yesterday to a Vodafone business webinar that pointed out the importance of the company's cloud-based data ocean. Now, Vodafone started early on that journey to having a common data platform-

DR: [10:38] With a Google project.

Caroline: [10:39] ... absolutely back in 2016. And it initially built that platform on premise and then as you say, moved it to Google Cloud and now they said it contains 27 petabytes of data.

DR: [10:50] Yeah, it's a great project.

Caroline: [10:51] Yeah. And supporting at least eight AI use cases that it's taking to scale across its properties, which it says are moving the needle on its business, including its net promoter score. But that's not easy, and it's a long journey. I mean, what's that, eight years now, that data modernization journey?

DR: [11:07] Yeah, the cloud project I think started in late 2019, at least publicly, they started talking about this project with Google Cloud and legacy data at this level and this amount of data, it took 18 months, and I'm sure Google Cloud helped them a bunch to do it. That to me kind of feels fast, but I think you're right. The ship has sailed on. Should we move BSS to the public cloud? I think everyone's like, yeah, that's kind of an easy decision and a no-brainer. And what I see people doing, and I think this is a really big mistake, is they're lifting and shifting. They're taking what they had on premise, and they're not doing

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this hard work of really using the public cloud, what it's really good for and getting your data cleaned up and they're just kind of moving the problem. It was bad on the ground and now it's bad in the public cloud and it's going to be frankly more expensive. They're not going to save any money.

[11:59] We're about to enter the complaints that the public cloud is more expensive. And I'm like, well, if that's the case, it's you're doing it wrong. But I think you're right. There's a couple of telcos in the world that I hear about. We had TELUS on last week and they talked about a project also with Google Cloud to clean up their data. It was painful, hard work, but absolutely worth it. Vodafone says the same thing. I think Telefonica is doing something similar. So we're seeing movement around doing the hard work to get the data into some sort of model. So then, yes, you're right, AI is a lot of garbage in garbage out. So if your data is not in the right shape, you're not going to get the results that you hope to get from AI.

[12:41] So there's been nearly a million downloads by almost 3,000 organizations working to implement the Open APIs in the ODA. But you mentioned this a little while ago, the idea around vendor interoperability seems a little bit counterintuitive, being able to swap out a portion of a vendor's product for any other vendor's offering. That seems bad for legacy vendors like Amdocs or Netcracker or Ericsson. Why do you think BSS vendors are agreeing to open up their systems in this way? Doesn't that really threaten their business model?

Caroline:

[13:11] Yeah, it is a hard ask, as I've said, and it will ultimately affect their business model. I am not sure they are agreeing to open up their systems just because they're implementing ODA. I think they're implementing ODA as a tick box item with my cynical analyst hat on. I think they're waiting to see whether operators really will change their procurement models. Quite often, procurement, it's a big roadblock to change in operators. I'm sure you've experienced that in the past.

DR:

[13:39] I could do a whole podcast on procurement-

Caroline:

[13:42] Absolutely.

DR:

[13:43] ... a procurement in telcos.

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- Caroline: [13:44] Well, to be honest, DR, I think perhaps you should because that's really where they need to change.
- DR: [13:48] Well, I mean it starts with the RFPs. You know, as a vendor, as Totogi we see a lot of RFPs with, do you support the TM Forum Open APIs? Are you ODA compliant? It really does force vendors to answer yes. A lot of those RFPs, it's all about compliance. What percent of the RFP can you support? They kind of forced your hand and Amdocs, for example, signed the manifesto years ago, but they didn't really do anything. And then all of a sudden now that we're seeing a lot of activity from Amdocs, they're up to 35 Open APIs now supported. The number of those is changing, but over 70 APIs halfway to it, they're kind of signaling we're at least going through the motions.
- Caroline: [14:29] Absolutely. And the promise is great. If it works, it will indeed transfer power back to operators. But back to those operators that are capable of working with Open APIs and those that can then harness, for example, GenAI LLMs to create the integration code, handle those version control issues and understand and synthesize the data held in different formats. And I think you've shown actually, DR, the power that the combination of an LLM and ODA can bring to the BSS industry and it's pretty disruptive.
- DR: [14:59] Oh, it's amazing. I mean, we're building a product that we call BSS Magic that sits on top of any BSS system and we can feed it an English written document, SOW, right? Like the description of the change that you want done to a BSS, and it spits out the code on the back end. This is now going to really drive down the cost of CRs, to the point where business people can really, with English language, ask the BSS Magic, "Hey, add a feature, change this UI," and it can really transform it.
- [15:33] And it'll be really interesting what that does to the BSS ecosystem because I think business people being able to query their BSS ecosystem to get insights, that's the real value of BSS. And we've been hamstrung by the time to do a CR or the cost to do a CR and imagine if the price is practically free and the speed and agility that we'll start to see in BSS systems and really the effect on subscribers and how the experience has really improved. I can't wait for that day.
- Caroline: [16:03] Yeah, and I think every vendor is going to have to adapt to that new world of cloud AI. And that trend towards openness

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is only going in one direction. So if you can't beat them, you've got to join them. And of course, all the BSS vendors are going to master this over time and find new ways to create value for the customers, but there'll also be new innovative vendors that bubble up like you. So I'll be watching the progress.

DR: [16:25] Well, we're definitely working hard to tear down all those walled gardens that all those legacy vendors have. And I think all the smaller vendors, the new vendors are really excited to do that. But speaking of gardens, I hear you're super into gardening. I do not have a green thumb at all. In fact, I call myself a serial plant murderer. I buy these plants for my home and then they're dead in eight weeks. But I do appreciate a well-kept garden, and actually my favorite thing to do is to pull weeds. I love it. It's kind of weird. What do you grow in your garden?

Caroline: [16:58] Well, all kinds of flowers. I mean, we've got a better climate I think, for growing both temperate and Mediterranean type lavenders and things like that. But we also grow vegetables as well, and it's just a pleasure. Like you say, pulling weeds, that's a pretty mindful thing to do, isn't it? It's a nice destresser.

DR: [17:15] Well, one time I was pulling weeds. I was like, "Wow, that weed kind of smells like tomatoes." And I realized I had accidentally over zealously pulled it thinking it was a weed. That was kind of a bummer. But like I said, I'm a serial plant murderer, so it's not really surprising that I did that. Anyways, Caroline, it was awesome talking to you about this. I could go on and on about how we're going to solve this problem because I think it's really valuable for operators to solve and shifting the power back so that they get the speed and agility at a price that all operators of any size can afford. It would be a total win. And so it was really great hearing your thoughts and look forward to seeing you soon in the near future.

Caroline: [17:56] Well, thank you very much, DR. Great to talk to you.

DR: [17:59] Awesome. Thanks. Stick around because we're ending each podcast with a Telco in 20 takeaway. I have 20 seconds to tell you something you need to know. Caroline said I was spot-on, that data layer harmonization is crucial to making vendor interoperability work. In BSS where customer data, billing information and service records are scattered across multiple vendor systems, harmonizing the data layer is step one. By establishing a common data model, you create a universal

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language that all your BSS components, from any vendor, can understand. Harmonization reduces complexity, improves data quality and guarantees scalability, all critical factors in an enterprise-grade BSS. It helps you to focus on creating robust integration logic rather than fighting with incompatible data formats. This leads to more maintainable code, easier testing, and ultimately a more flexible BSS ecosystem, that can adopt new services and technologies across your enterprise.

[19:00] Currently, the ODA is not designed to address this key issue, but today's your lucky day. Generative AI happens to be really, really good at solving this exact problem. And Totogi's BSS Magic is specifically designed to use GenAI to harmonize data structures. BSS Magic creates a common data model across all your vendor BSS systems, so it can generate code for you to integrate, interchange, and swap out components to your heart's content. It isn't just TM Forum compatible. This will work with any vendor system that has an API layer that you can code against. Talk about magic. It's amazing.

[19:39] You know what else is amazing? We're about to launch our 100th episode of "Telco in 20." A huge thank you to listeners like you. Be sure to tune in on October 1st. It's going to be an epic episode. Until then, let's connect to talk about transforming your BSS ecosystem. I'll be at the NOVACOM Africa 1-to-1 Telco Summit in Cape Town, South Africa on October 1st through the 3rd. We can chat while I'm there, shoot me a DM on LinkedIn or X @TelcoDR to set up a meeting. And don't forget to tune into more amazing "Telco in 20" episodes. Like and follow, and leave us a five-star review. Sign up for my rockstar email newsletter on TelcoDR.com and check out our awesome YouTube channel for more Telco insights. Later nerds.