



**HIT Standards Committee
Architecture, Services & Application Program Interfaces Workgroup
Final Transcript
February 26, 2015**

Presentation

Operator

All lines are bridged with the public.

Michelle Consolazio, MPH – FACA Lead/Policy Analyst – Office of the National Coordinator for Health Information Technology

Thank you. Good afternoon everyone, this is Michelle Consolazio with the Office of the National Coordinator. This is a meeting of the Health IT Standards Committee's Architecture, Services & API Workgroup. This is a public call and there will be time for public comment at the end of the call. As a reminder, please state your name before speaking as this meeting is being transcribed and recorded. I will now take roll. Arien Malec?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

I'm here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hey Arien. David McCallie?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Present and accounted for.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, David. David Waltman? Gajen Sunthara?

Gajen Sunthara, MS – Presidential Innovation Fellow – Department of Health & Human Services

Present.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

George Cole? Indu Subaiya? Janet Campbell.

Janet Campbell – Software Developer - EPIC Systems

Yo.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Janet. Josh Mandel?

Joshua C. Mandel, MD, SB – Research Scientist – Boston Children’s Hospital

Hi.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Josh. Sean Nolan? And from ONC do we have Debbie Bucci?

Debbie Bucci – Office of Standards and Interoperability – Office of the National Coordinator for Health Information Technology

I’m here.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Debbie. And we also have Jon White on.

P. Jonathan White, MD – Acting Deputy National Coordinator – Office of the National Coordinator for Health Information Technology

Present and accountable.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Hi, Jon and with that, I will turn it back to Arien and David.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Whoo hoo. All right. We had a...we have generally high expectations of your co-chairs and I hope we’ve met them, but we had a little bit of churn in the middle there. So we were supposed to give you some homework based on a reframing of the charter and charge and a reframing of the questions. I think our major feedback was that some of the questions were a little confusing, some of them were redundant and some of them were misplaced. And that we wanted to reframe the feedback. I think we’ve put together a deck that accomplishes the goals of that level of reframing. It wasn’t in time for this group to appropriately do the homework exercise so I think we’re going to be asking in this meeting whether the framing that we put together is appropriate and the high level recommendations we put together are appropriate and then assign homework after to fill in additional comments based on the framing or based on the revised framing. If we go on to the next slide.

Here’s where we are, we’re commenting, still commenting. Next one. And this is our charge; we’ve fixed the and to say an ecosystem, which I’m very proud about; otherwise, this hasn’t changed. Next. Okay, David. So we’ve rejiggered our hourglass a little bit, so I’m going to throw it over to David to explain our simplification...our hourglass simplification.

Joshua C. Mandel, MD, SB – Research Scientist – Boston Children’s Hospital

And it’s got wood trim.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

It has a wood trim now, it's exciting. This is a skeuomorphic, I guess.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, skeuomorphic hourglass.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Even though skeuomorphism is déclassé these days.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Passé. Yeah, and maybe in the next version it can be a little giff and it'll turn itself upside down on these words and flow through the hourglass. I'll get to work on that. So first I want to join Arien and apologize that we didn't get this out to you earlier for more thoughtful review. Both of us have just been really busy. But the saving grace, I think, is that we're going to go through material that we've actually been through as a group and in many other settings, very similar issues being debated by all of us so...or almost all of us, so I'm hoping that what we've got for you is not going to be shocking or different or controversial until maybe we get to some of the questions near the end. So, accept our apologies for having day jobs; but maybe that gives our work a little bit more authority based on real experience.

Anyway, so what I thought we would do here with these slides, these are...I'm looking at this as the beginnings of the deck that we put together for our report out. So, take that in the back of your mind when you react to this is, are we communicating sufficiently to people who haven't heard our debate? So we dropped out a lot of our history slides and we can bring them back in, if it's necessary, but let's try to keep something simple and presentable to the Standards Committee and in part of our formal report out.

So, we've referred internally many times to this notion of the Internet hourglass and so I thought we'd actually...I'd go get one on the Google machine and see what Google thinks the Internet hourglass looks like and this is one of the more presentable ones that came up. So I would review, in the process of explaining to the out...to our larger groups that the Internet has worked in large measure because of the homogeneity of the really critical piece in the middle, the IP protocol, and then increasing heterogeneity and diversity as you move up the stack. And that we would seek to replicate that parsimony and approach to scale in our healthcare IT stack that is so fundamental to why the Internet has been successful. So, we'll give a little bit of introduction, which I think for all of us is now old hat, but we'll probably explain it maybe in a little bit more detail to the broader committee.

And then on the next slide, we...I took a crack...Arien and I took a crack at what we think the layers might be named and look like in the healthcare IT equivalent of the upper half of the hourglass. And I'm going to go in a second into detail about these, but, I probably will introduce them just so people can think for a few minutes about the notion of these layers that at the bottom are tightly constrained and as you go up, get more and more diverse, but layer on top of the capabilities of the lower layers.

So at the very bottom, at the narrow waist, we're just going to call it the Internet, and that's basically HTTP, we'll come into all the details in a minute. Above that is the core composables, which is the name that we...our working hypothesis for this notion of these building blocks that we expect to be powerfully reusable in composition. The layer about that is the orchestration patterns, hat tip to Janet for that suggestion of orchestration; I think that's exactly the right word to use, which is basically the complex

way that you can weave the composables together to achieve some consistent handshake across complex stakeholders that are partnering together.

Above that would be the interoperability use cases and I look at those as instantiations of the orchestration to solve a particular problem. And then at the top, just referencing back to the JASON Task Force is the notion that these things need to be existing inside of some kind of a data sharing arrangement that actually puts in place the trust and governance and contractual and business mechanisms that make interoperability actually happen. And in our presentation I would probably stress the point that just because you have cool APIs and cool interface standards doesn't mean interoperability actually happens, you've got to have some kind of an arrangement in which it occurs.

So before I go to the next slide where we come up with examples for these, are there any high level reactions, objections or clarifications to this...these names?

Janet Campbell – Software Developer – EPIC Systems

This is Janet; I think in general this looks really good. And I want to say, by the way, me asking or prompting or suggesting that you guys didn't have anything better to do was not me doing that, it was mostly me trying to get out doing work...the only other...the only thing I was thinking as I was, and I don't know if there's a better way to come about this, is...sometimes it's best to be composing within those composables.

So the example I think that we always use is like if you had to make 20 trips to the grocery store to get milk and bread and eggs, that's not as good as getting it all at once, and that's kind of the...of bundling...composables together. I don't feel strongly about this because it's kind of represented by this anyway, but if there's a way of representing that somehow so all the composables might be made up of other composables, that would be good.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, that's an interesting idea; let's see if we can find a way to repre...to capture that thought as we go forward.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

I'm wondering whether we just put...insert the word FHIR bundles in the next slide.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, I think that's a good idea. So let's go to the next slide, because we might as well get concrete. So what I've done here with bad art, the previous slide was generated by Microsoft's elegant algorithms; this one is generated by me, which is pretty crappy, but okay. The layers correspond with the same names that we went through from the Internet at the bottom up to the data sharing arrangements at the top.

And what Arien and I did is we spent a fair amount of time arguing about the parsimonious set of names that should go as exemplars in each of these layers. And the goal here is not to be exhaustive, but to be sufficiently representative so that people could look at it and say, oh, I see what you mean. So at the bottom, HTTPS and all that that implies, which is UDP, TCP, IP, TLS, etcetera. The layer above that, the core composables, we settled on the notion of profiled FHIR to account for both the FHIR API itself and an associated set of profiles that would make the API usable. We picked OAuth 2 and OpenID Connect OIDC connect as exemplars of the security components that we would expect to see reuse of and then

we lumped all of the user experience and programmability of the web App space into just HTML5. Woops, go back one slide, there we go. So that's the core composables. Let me stop there and before we go higher say, does that make sense so far?

Joshua C. Mandel, MD, SB – Research Scientist – Boston Children's Hospital

Yeah, I actually really like the number of diverse things that you've stuck at each of these layers, because it gets across the point that we're not trying establish a strict hierarchy, but these are just sort of loose classes of things that we think about fitting together.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

And I think the keyest point here is that for example with the core composables and the Apps orchestration pattern, pretty much everything, except for maybe remote CDS, can get done in the interop use cases. So there's a...I think the key point here is smart work done at the first two layers will lead to a proliferation of trivial use cases done at the heterogeneity explosion, the Cambrian explosion layer.

Janet Campbell – Software Developer – EPIC Systems

(Indiscernible)

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And Josh, to your point, at one point we had tried to color code these by whether they were data composables or transport composables and we just...it got too complicated, so I'm glad you're reaction was that it seemed right, that's good feedback. Somebody, I cut somebody off.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Except Janet's going to say...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, Janet?

Janet Campbell – Software Developer – EPIC Systems

Yeah, I think I like it. I was trying to figure out; you've got...examples but...that there may be other things here. But I know that elsewhere we also want to have more...down by the bottom of the graph. And so what I'm wondering is, are people going to look at this an immediately react and say, you didn't say whatever and if someone says, you didn't say whatever, is our answer, well these are just examples? Or is our answer, well, we were trying to keep parsimony?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

My answer would be, these are the most important examples that we could come up with, but we don't intend this to be a complete enumeration; but parsimony says don't add things to it that you don't need. So I think part of the plan going forward in this 10-year roadmap would be to flesh out what are the actual participants at each of these layers. So, in the first 3 years, what you're going to see when we get to these slides in a few minutes, we propose nailing down the core composable part of it, that's the most important part to get correct early on, and identify one or two key orchestration patterns. But then over time, you would expand to other orchestration patterns as the needs arise or as people do

pilots and surface a pattern that looks like it's worth sharing with the broader community. So, a little bit of both.

Janet Campbell – Software Developer – EPIC Systems

Okay.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah...this is Arien; I mean, I think you need to buy in that...there was some work that we did previous that's explanatory of the concept that I think you need to buy into. That this approach to architecture makes sense and I'm wondering whether in the version of this that we share with the Standards Committee we maybe want to do a little more background. We skipped that for this group, but, it's super-important that you believe that you want parsimony in the core composites, a little more variation, but still not much in the orchestration patterns.

But that's a really key architectural constraint and that if you have...if you say you need parsimony, then these aren't examples, these are recommendations for the parsimonious layer. Because if these are merely examples and there could be other ones, then what you do is you drive heterogeneity and not parsimony. I do think it's important to say, this is the best approach...this is the best going forward approach to a parsimonious layer that we got and we recognize that 10 years hence, there will be quantum-based semantic interoperability and we'll probably want to shift to that.

But I do think you kind of...we need to stand strong on if you believe this architectural pattern, you believe we need parsimony at the core composable layers and you also need to believe that we need to make a choice about what that...what goes in that parsimonious layer.

Janet Campbell – Software Developer – EPIC Systems

Well and then here's what I'm thinking with that then. It's not so much 10 years in the future because if you think of like an interoperability pattern like structured modality work lists or one of the technical frameworks for radiology or something, the ones that so far either maybe haven't been FHIR profiled...or the profile...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

You'll see that coming up.

Janet Campbell – Software Developer – EPIC Systems

Okay.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

You'll see that coming up.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Umm, one thing, it may make more sense to present this as a build slide where each layer kind of gets layered in as you talk about it. I'm...I didn't do that here because this group doesn't need that, but it is a little distracting to see all these things all at once and to try to...

Janet Campbell – Software Developer – EPIC Systems

(Indiscernible)

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...map.

Janet Campbell – Software Developer – EPIC Systems

The point that I was making is that there are a lot of interoperability patterns out there that don't use FHIR, profiled FHIR...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Janet Campbell – Software Developer – EPIC Systems

...and the question is, is the Standards Committee and/or worse, the Policy Committee because they're less technical, going to look at this and say, well we have to rewrite everything for FHIR now when some of these patterns actually...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah.

Janet Campbell – Software Developer – EPIC Systems

...are doing okay, you know?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

You'll see that coming up.

Janet Campbell – Software Developer – EPIC Systems

Okay.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

You'll see recommendations coming up and sort of hold your thunder for that and see if we framed this the right way or if you've got...

Janet Campbell – Software Developer – EPIC Systems

Okay.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And one of the things we need, I've learned obviously in working for a company that sells things is, you really have to have crisp names for what it is you're doing so that, you need a title, you need a name for it. So I've picked composable API era, and I don't think that's terribly mellifluous or communicative, so I'm wide open...or we are obviously open for better names. I didn't want to call this the post-v3 era or the FHIR era or, there were just non...I couldn't come up with anything that captured what we're trying to describe here, but we are talking about, fundamentally, a newer...a way...a new way to do some of the things that we've done in the past.

The rebalancing over time, we're going to get to. We don't obviously think that people are going to turn one mode off and turn the new mode on any more than people have turned off their v2 interfaces to

replace them with v3; but I think we do need a name to describe this. So it's the composable era, but I'm open...we're open for better names. Let me keep walking up the stack here. And I think again, for this group, that will go quickly and then we'll get to the more important discussion that Janet's getting at which is, what is...how does this rebalancing actually work? What would we recommend on that?

So above the core composables, we've listed here what, one, two, three, four sort of key orchestration patterns. We don't necessarily think these are absolutely the right names, I don't think these things are managed at the level of namable orchestrations yet. And maybe that's one of our recommendations is that we really should focus on sort of standardizing some of these orchestrations and giving them names.

But we obviously have one that we've all toyed with recently in some of the...in work that we're all doing in our own worlds around Apps as an orchestration model, and we listed SMART Apps and mobile health Apps, just to reflect that the orchestrations might be slightly different if it's happening inside an EHR context versus in a smartphone de-connected...decoupled context. We listed peer-to-peer, which is just the notion of two systems that need to trust each other and speak FHIR back and forth to each other. And then brokered trust, which is kind of a placeholder for more of the CommonWell or e-Health Exchange kind of model where you have trust between peers in a central source that is then brokered out for peers that need to talk to each other on a transient basis. And then pub-sub is listed because they ask us to list it and because we know it's a powerful metaphor, I don't have a particular use case in mind for it quite yet, but...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Well, I've got a bunch of them, actually, but we...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

(Indiscernible)

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...that's right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So those were our orchestration patterns and then above that, the notion of interoperability use cases. The thought here, if it's not obvious I'll say it, is that these are all instantiations of a particular orchestration pattern and at some point in the future we need to define some process by which these instantiations occur. But we think that many of these things...many of these use cases would collapse down to a lot of reuse of the Apps model or a lot of reuse of the pub-sub model and so forth.

So we listed SDC and RFD as two current capabilities that are fairly complex to push data capture into an EHR workflow and we think maybe those are really smart Apps done with a little orchestration around coordinating what you push into the workflow. Closed loop referrals is obviously something that could be pushed in from a local system that manages those into the workflow with an App like model. I just coined the phrase InfoButton-2 to say, what could we do better with an App model that has FHIR access to broad swath of the record than we can do with InfoButton, which has a very narrow view of the patient's context when you invoke it. I think we have a lot of opportunity to do that better; and so forth. So I don't want to go and review each one of these, but those are exemplars.

And then at the data sharing arrangement layer, we just listed the notion that these things are going to happen in the context of some business drivers, either an ACO that's putting together services in a community or the eHealth Exchange or CommonWell, which are building nationwide connectivity strategies; Surescripts which is doing the same. The vendors already have and more will have App stores and we'll see probably local referral networks and the like where people orches...where people authorize the use of these orchestrations to solve some certain business problem.

So let me stop and see if anybody has any objections to any of the specific things that are listed here or to the ideas contained therein. Wow, either I put everybody to sleep or the line went dead or...so let's go to the next slide then.

So what I thought we would do here again, and this is more for explication a broader community, is to work through one orchestration example at a lightweight level, just to try to define what the heck we mean by an orchestration of composables. So I shamelessly have listed the SMART App model that Josh has been working on so diligently and called it Pluggable Apps. And this is the...the orchestration is to put a conversational user experience in provider workflow by leveraging the HTML5 composable for the user experience, leveraging FHIR as the data service, read or read and write into the record and OAuth 2 and OpenID Connect for authentication and authorization to the FHIR service. Mentioning that in this case we have to define also a context passing model and maybe that is so important and fundamental that that could become a future notion that gets pushed down to the composable level because it's reused so many times. Or maybe it's specific to this particular orchestration. Those are the kind of things I think we want to work out.

And then, as you all are familiar, there are many potential use cases that fit the pluggable App problem...pluggable App approach, and I just mentioned a few here that we've seen examples of as people are starting to experiment with deploying SMART Apps; embedded clinical decision support, prior approval conversations, appropriateness screening conversations. I've had some conversations, as I know some of you have, with CDC about whether they could push out urgent intervention data capture screens where the data elements that need to be captured change on a daily basis, actually push those out as a pluggable App. And you see some of the others there as well. Josh, are you still on?

Joshua C. Mandel, MD, SB – Research Scientist – Boston Children's Hospital

I am, but only for about two minutes.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay, is this generally okay with you or am I missing something?

Joshua C. Mandel, MD, SB – Research Scientist – Boston Children's Hospital

Yes, it is, I like it. It is very consistent with what we discussed, I don't know, two calls ago I suppose. So, yeah...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

You're going to miss the exciting recommendation section so when you come back, let's maybe we rethink on that.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Joshua C. Mandel, MD, SB – Research Scientist – Boston Children’s Hospital

Okay, yeah, sorry to do that, but I just could...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, no problem. So let’s go to the next slide, which is not to be walked through, but just as an example of how one might document an orchestration. And it makes sense to me and I don’t know if it’s a good idea or not, but makes sense to me that you could imagine standards activity focused around just the orchestration itself, and that that’s the thing that ought to be standardized. And then the particular use cases are just, you know, it’s almost like profiles on the orchestration.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

As long as you get the data in the core composable data layer and as long as you implement the orchestration just so, then the skies the limit in terms of that particular orchestration model; really all bets are off if you need some data that hasn’t been standardized or if your orchestration doesn’t fit the particular model. But I think there are so many round pegs that go into this particular round hole. I’ll do a little plug for pub-sub because I think there are multiple models that...where something happens in one App and you want to take advantage of the fact that something happened, there’s new data about this patient and use it to drive a separate workflow.

We’ve also talked about the EHR-to-EHR workflow that’s the peer-to-peer model and I think one of our recommendations is going to be that as we identify...we should probably finish this orchestration model and as we identify other orchestration models that want to get done, we put the same kind of energy and effort into documenting and profiling or standardizing those orchestration models.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay, next slide. Let’s get to the meat of what we need to discuss. Okay, so Arien, do you want to take over and drive from here because you touched these last.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, I touched these last, exactly. So here’s where we are providing recommendations. And the first slide is a general recommendations approach. The first bullet uses lots of fancy words, but it’s making the point that the combination of parsimony of transport and security, parsimony of content and parsimony of common orchestrations allows for the Cambrian explosion; so therefore do that. So I’ll pause there; that’s...the meta-recommendation is move towards this architecture. And towards is a deliberate word as is the notion of rebalancing in the second bullet, which I shamelessly stole from Janet.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, all our good words come from Janet and then we have to figure out how to pronounce parsimony or...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Parsimony, that’s right. I’ve heard Halamka say parsimony so many times that...

Janet Campbell – Software Developer – EPIC Systems

(Indiscernible)

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah.

Janet Campbell – Software Developer – EPIC Systems

I think the only thing that, I mean, in general this makes absolute sense from a technical perspective as well and from an engineering perspective. The only thing I'm a little bit concerned about is that rebalancing towards a standard portfolio is good, especially as you are continuing to refine and make use cases work better...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right.

Janet Campbell – Software Developer – EPIC Systems

So the use cases out there do work...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

You'll see that, so hold your thunder one more slide and see if we got this captured.

Janet Campbell – Software Developer – EPIC Systems

Oh, okay; you said my name so I thought it was my turn to start thundering.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, yeah.

Janet Campbell – Software Developer – EPIC Systems

Okay, sorry.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

No, it was definitely your turn, but for that particular one, I think we got it captured in the next layer. As I read these slides, I realize what we're saying is, the high level of what we're saying is, we think this is a good architectural pattern, let's adopt a deliberate policy of moving towards that architectural pattern and allow for appropriate time to develop, adopt and use that architectural pattern during the deliberate rebalancing period. And then the meta-comment of, we're talking about something that's one level below these marketing terms like SOA and REST and they're not terribly useful.

Janet Campbell – Software Developer – EPIC Systems

I have, I think, another...a suggestion that is not...oh wait, maybe it's okay, maybe you're getting there. The only thing that I'd say then with these recommendations is that in my opinion, when it comes to the actual standards themselves that that would be good for the standards, what forecasted by...whatever they call it, the partly sunny, chance of standards while the theory and the meta is what goes into the roadmap, which I think is what you're saying.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right and yeah, so we're really talking about the Standards Advisory, I think we're going to have another turn at this where we talk about some putative document that might be coming out sometime relative to actual certification criteria and I think we're...

Janet Campbell – Software Developer – EPIC Systems

Did you say punitive or putative?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

I did say putative.

Janet Campbell – Software Developer – EPIC Systems

Oh, okay, I thought we were about to be punished by certification.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Punitive certification, I didn't say that. Let's go to the next slide.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

That's a Freudian error on the listener's part.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's exact...maybe so. All right, so I think Janet, the thunder you want to hold is now one more slide down. So at this slide we're talking about the glide path towards, and that glide path is a recommendation that ONC support SDO and public/private work to define core composable API services profiles, support...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Arien, Arien, let me...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yup.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...interrupt you just to put the context here. This is...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Oh sorry, thank you.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...2015 to the timeframe, so we've got recommendations for each of the three timeframes they ask us for...suggestions for.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Thank you.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So I just wanted to...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

So in the 2015-2017 period, we recommend that ONC, maybe create is probably the wrong word, support a glide path for core composable and orchestration patterns by supporting SDO and public/private work, to define the core composable API services profiles; support SDO and public/private work to define orchestrations for the App orchestration and support future work to define other high

value orchestrations and security components and we recommend peer-to-peer and pub-sub. And then, and this is kind of a key one, support to the extent that there is a priority use case, and maybe this is not worded as strongly enough as we could, to the extent that there's a priority use that wants to get done, support that that work get done in terms of core and orchestration patterns. And so, as an example, PDMP is one of those examples that fits perfectly as a pluggable App. Ebola or high profile condition decision support is a beautiful thing that fits perfectly in terms of a pluggable App. So when you have a use case, first look for ways to define it in terms of core and orchestration patterns.

So I feel like this one we're just recommending stuff that we've already said, but I'll pause and see if, I guess we only have Janet here, but if we've got a Janet comment.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

And Arien is CDS, which one is CDS?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Clinical decision support.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Okay, you're not talking about the discovery, that other one...anyway CDS.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

No. Yeah. Can we go to the next slide? All right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So this is...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

This is reduce friction and distraction to adopters and implementers by minimizing certification requirements overall to allow ample time to pilot, adopt and refine core orchestrations. Ensure that government incentives be met using newer approaches even if not formally adopted. Minimizing changes and working with SDOs to create a transition path to standards that have established use but are not based on going forward architecture, and Janet, this may not be as sharp as you're looking for. What I'm intending to say is, don't blow up stuff that is existing and working, but create a thoughtful and appropriate transition path for it. And we might want to more sharply word that or rewrite it.

And then the second one is, to the extent that you've got something new, don't do that if it's not based on the architecture that we've proposed. And so three of the example specifications that were listed in the best available standards, there may be some argument over HPD+, but CSD and HIEM are two examples that were called out as best available standards that as far as I know, nobody's actually used and aren't based on any of the architectural patterns that we've discussed.

So I'm going to pause there and this is definitely Janet time.

Janet Campbell – Software Developer – EPIC Systems

Oh no, this looks good except did you just state that HIEM and CSD were things that we should avoid or things that we should...alternative that's based on...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

I was giving HIEM and CSD as examples of things that...HIEM is an example of something that's been out there that I don't know that anybody's actually used, but it's named in best available standards list. And CSD is something that showed up in a best available standards list, altho...despite the fact that as far as I know, it's never been used, although you may have a different perspective on it.

And we could remove the specific examples if that's too contentious, but the core point here is, you just go down the S&I Task Force list and you've got structured data capture that has a set of named ISO standards that aren't consistent with the architecture. You've got PDMP that hasn't yet been implemented or doesn't have recommendations in terms of its architecture. You can just go S&I by S&I initiative, you can go and look at some of the examples of best available standards that actually haven't been put in production use and the recommendation here is, before you name something new, look long and hard at the architectural patterns and try to fit them into the architectural patterns because you're going to get way less friction.

Janet Campbell – Software Developer – EPIC Systems

That makes sense.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

And so bullet 3 really wants to say, don't take this as saying we want to blow up stuff that isn't based on the core architectural patterns if they're working, results over HL7 V2, if it's working, don't be in a quick hurry to blow it up, but do work to create a long term transition path. And then the fourth bullet says, and before you want to throw something new on the pile, it's best if that something new on the pile gets done in terms of the core architecture.

Janet Campbell – Software Developer – EPIC Systems

If I understood you correctly, then that should say from standards instead of to standards in bullet 3, right?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yes.

Janet Campbell – Software Developer – EPIC Systems

Okay.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

And we could...I would...Janet; I would welcome your feedback for how to word that bullet better.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah because...this is David; I agree that number 3 needs wording changes but Arien, let me just ask, is the spirit of number 3 the notion that if you have an existing standard that's in use and is working that we're suggesting rather than continue to expand that standard, define a sort of a what's the technical term for an API that's being phased out...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Deprecate.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...deprecate, right, a deprecation strategy and shift focus to the newer architecture that is hopefully more powerful and expandable in the future.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, I mean deprecate is kind of an ugly word that sets people off; legacy is an ugly word that sets people off; but all of us have experience, who have to support product, of having something that works, it works perfectly well, it's not causing anybody trouble but the architecture just ain't where you need to go. And so you know you want to get it to the new architecture but you also don't want to disrupt people's lives in the interim so what you do is you say, hey this thing works, it works for these purposes, it's perfectly fine for those purposes, continue to use it for those purposes. But you probably shouldn't build new stuff on top of it, you probably shouldn't do a lot of major modifications to that thing, you kind of should put it into a bug-fix mode...on a maintenance mode and put more of your energy into the new approaches.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah and so it would be a roadmap in a sense, a roadmap is...we've got too damn many roadmaps, but...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right. It is that rebalance portfolio, it doesn't say sell all of your...this stock today and buy all of that new stock tomorrow; it says, yeah, shift from to over time in ways that aren't going to cause too much risk and disruption.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah and for each of the existing standards that we're using or that are a part of existing incentive programs or certified technology, you'll have to define on a standard by standard basis how you do that, so...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Correct.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...to make up something, we might continue to see enhancements to the CDA stack, because we're going to be exchanging aggregated structured documents for a long time to come and we have ever increasing needs to do that. But we might not expand the XCA, XDS model any more, we'll just say, that's stable for what purpose it does, but we improve the CCD, but not the XCA; something like that.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Right and we put more energy into improving the HPD v2...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Do I have that right?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

MMHV?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

MHD v2, we put more energy into improving MHD v2 and make sure that it fits a wider variety of use cases.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Right.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right, let's go on to slide...so I think we got some homework in general of reviewing these recommendations and providing suggested changes as well as additional recommendations. Slide 12 is a miscellaneous...sorry, slide 12 is the 2018-2027 time period. And I'd say the high level here is continue doing that, continue doing the rebalancing and as we see matured use cases, consider establishing those mature use cases as the new floor. And so we've got a bunch of words and a bunch of bullets that kind of amount to that; refine and extend core composables, profiles and orchestration patterns, expand the number of piloted use cases, address needs for national scale services such as MPI, RLS, directories, etcetera. Bridge networks; consider taking stuff that's mature and well established and making it the new floor and begin to discourage legacy APIs.

And I use the "L" word here, but again, through the 2015-2017 time period, continue to use those APIs but don't add to them. In the 2018-2020 period, start deprecating and phasing out and in the 2021 to 2024 period, add additional complex data profiles that might need more robust data models and contemplating doing all this all over again. So I'm doing to pause and see if this makes sense as a framing for 2018-2027.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

You mean 2020, you keep saying 2027.

Arien Malec – Vic President Strategy & Product Marketing – RelayHealth Corporation

2020...not 2020, 2025, isn't that right?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

We got the dates wrong.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

We've got a 10-year roadmap.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, we got the dates...the title is right but the dates of the...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right; it's a 10-year roadmap so 2024.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah. Yup. I think that the, address the needs for national scale services is a really interesting point that may, when we present this, require a little bit more elaboration. The thing I use in my own head to think about the analogy here is, we have the Internet core standards that allow Amazon and other web sites to build stores on the Internet and each store is consistent with web standards, but they do whatever they can to make their store more compelling to use. So when it comes time to actually buy a book, you

interface with a national credit card service that is standardized enough so that all of the different stores can use...can process credit card transactions correctly.

So that's a cross-cutting national scale service that addresses an emergent need that's not addressed by the core services. And you could imagine record locators and MPIs and global directory services being examples of such kinds of things that might emerge...the need for which might emerge.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right. Any comment? Two, three, four and next slide. So then there was stuff that we're not quite sure whether we should comment on and/or how it would fit. So, Direct and Directed exchange; I went on record in 140 characters as saying that if we did Direct now as opposed to 5 years ago, it would probably be a straightforward FHIR profile but that the core issues that are actually issueful for Direct would still remain.

Number 1 is, national scale trust; number 2 is the content and content model; that is, when I see people complain about Direct, they're usually not complaining about the actual transport spec itself, they're usually complaining that my trust network doesn't bridge with your trust network, although we're seeing less of that. And they're also complaining about, when I receive it, the workflow that I have and the data package that I have kind of goes ugh.

So one question that I would have for this group, at this point a group of one, would be...

Janet Campbell – Software Developer – EPIC Systems

There are other people on.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Gajen is on.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...Gajen's on, okay.

Janet Campbell – Software Developer – EPIC Systems

Yeah, come on.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Okay, group of two.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

If Jon White is still listening, I'm going to ask his opinion at the end of this as to whether...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...we're communicating appropriately. So Jon, be warned, if you're listening.

P. Jonathan White, MD – Acting Deputy National Coordinator – Office of the National Coordinator for Health Information Technology

So, Jon White is still listening, as in the whole time. I will probably leave in 5 minutes, though.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Okay. Well we would love your feedback on whether we're thinking about this appropriately; whether this kind of feedback is useful and appropriate to ONC and whether it would inform policy work because that's clearly our intent.

So with respect to Direct and Directed exchange we could skip over it or we could address it. As I said, my perspective, which is a semi-informed perspective, is that the actual core transport bits. I'd...I wouldn't mind trying...them something RESTful and FHIRy based, but I'm not actually sure that's where the main issue is; I think the main issue is bridging trust networks, which we're making progress on. And the bigger issue is harmonizing content and content specifications, which is why there are some question marks here about addressing those three things that want to get done. And I'll just pause there and see if Gajen, Janet or Jon have any questions relating to those three, should we do recommendations there.

Janet Campbell – Software Developer – EPIC Systems

One possible option might be to use that as an example of your 2018, 20 whenever part...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yup.

Janet Campbell – Software Developer – EPIC Systems

...like how...what it looks like to phase that out or something.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Fair point. Fair point; that's a great example, great idea. Other folks?

P. Jonathan White, MD – Acting Deputy National Coordinator – Office of the National Coordinator for Health Information Technology

Since there's a small pause, it's Jon White; I'll offer you the general comments. So I'm listening and I'm processing, so not...I'm not going to give you a whole substantive, you know, this is awesome and here's why it's awesome. In general, everything that you're talking about is of interest and is something that I'm kind of turning over in my head and thinking about. The most useful stuff for us, for you all, are the things that we asked about, right, you know, the specific charges that we ask about. As I often hear from my teenagers, I am not the boss of you. So I'm not, ultimately at the end of the day going to tell you what to say or not to say, that's why you all are an advisory group, right?

So, the things that are most useful to us are the things that we had specifically asked about. In terms of the specific recommendations you're making, they're all appreciated and they're all good and make me think hard. I'm going to have to think about it a little bit before I can give you, this is really helpful because of this or this is not. Does that all make sense?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, so the struggle that we had, I don't know if you were there for the last call that we did, the struggle that we had was we looked at the questions and at the highest level, like is this consistent with

the architecture? Is this...what should we...what do you recommend doing for the 2017-2018 time period? We could frame up appropriate requests; a lot of the specific questions we just scratched our head and just couldn't figure out how to address them in ways that were meaningful. And we might want to maybe give more detail about why we couldn't do that, to the extent that that would be helpful.

P. Jonathan White, MD – Acting Deputy National Coordinator – Office of the National Coordinator for Health Information Technology

Okay, yeah, that actually, that would be helpful. I was...I'm sorry; I wasn't here for the last call. It's...if we're asking questions that are not clicking, then of course, right, you know, say not clicking, here's why it's not clicking. But we did ask those questions because we were curious about the answers.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Good. Okay.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

So Jon, what we can do and we can even do it somewhat formally is just go back through the questions and then, I think many...most of them can be referenced to a particular slide in the deck. In other words, rather than answer the questions in a piecemeal fashion where it would be very difficult to figure out what the big picture was, we said, let's communicate the big picture and then we can reference to it from the questions. Because there are questions like, should ONC encourage the development of RESTful termino...RESTful APIs, well yeah, and here's an explication of how you would do that. It's...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...the questions were so vague as to be either pointless or only meaningful in the context of a larger story. So we're going to tell the story and we can cross-reference to the questions.

P. Jonathan White, MD – Acting Deputy National Coordinator – Office of the National Coordinator for Health Information Technology

Yeah, I would say that there's...you're not the only workgroup to wrestle with this, so no problem, no worries. Carry on.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yup. Thank you.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Well, and it's all stimulated this good discussion...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...so, it's achieving the desired purpose, we just may get there in a circle rather than cross-path square.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

A spiral, an ever-expanding spiral.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Right. And the other thing is that this is what's really happening; this will happen regardless and the question is to what degree will ONC regulatory apparatus stay in sync with it, but...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...or harm it or help it.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

It's going to happen, so...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Umm. Okay, so next bullet...so I like Janet's suggestion of using Direct and Directed exchange as an example of a transitional strategy in the 2018-2021 time period. And it might be useful to give a couple of for instances that are non-normative for instances, just so people can wrap their head around what we're talking about in terms of a recommendation.

Our next question was should we consider national infrastructure components as part of the architecture? And I'll also say that the IO Workgroup has taken on some of this stuff, because there are some governance recommendations relating to provider directories and the like. But if we believe that there are some critical infrastructure components that want to get done that don't fit the orchestration patterns that are essential glue, the DNSs of health information exchange that might be useful to talk about.

We've tentatively teed up a couple of them, we understand that some of us represent some organizations that have done certain things in certain areas and so, with our federal advisory hats, we want to make sure that we're carefully separating our advocacy work for particular areas versus our policy work. But with all that being said, we've got three question marks, does anybody want to have any suggestions relative to addressing those question marks? Was that an "I wouldn't touch that with a 10-foot pole or was that an "eh" or was that a...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Thinking about it.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...still thinking about it?

Janet Campbell – Software Developer – EPIC Systems

I mean the...I don't know, the EDGE API, for example, is how about sort of the idea with that? I don't know that you kind of do whatever you wanted to on the EDGE or that you've got to...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, I believe that that's actually not going to be true.

Janet Campbell – Software Developer – EPIC Systems

Huh.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

I believe that if you read between the lines of the 2014 v2 certification requirements and the listing of four normative EDGE specs with some suggestive eye-brow waggling in the direction of maybe this is going to end up in the 2015 spec, we'd be in a world where in effect XDR would be the required EDGE spec that everybody would need to implement.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Or whether it's required or not is what's at...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...is what's at is right, this is, so again, this is just all...

Janet Campbell – Software Developer – EPIC Systems

So is XDR end up in...right?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, yeah, so authenticate in the middle but then on the EDGE...

Janet Campbell – Software Developer – EPIC Systems

Oh, I thought they let...the EDGE...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

So on the EDGE they were allowed POP, IMAP and SMTP, on the edgy EDGE. But...

Janet Campbell – Software Developer – EPIC Systems

Okay.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

(Indiscernible)

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...some of us chose, and on this call, I think with George Cole, there were two examples of each...some of us chose plain old XDR as our EDGE back and some of us chose RESTful or simpler EDGE APIs. But we'll have another chance to weigh in on that relative to the putative, not punitive, Certification Rule; but probably enough said about that.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah, my gut reaction Arien, having typed these in and now looking at them a couple of days later is, I'm not sure that the...well, I don't know, maybe we should just think about them. We've got some time.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, what I like is Janet's suggestion that we design some examples of the rebalancing and transition...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...and that these kinds of discussions would likely be pre-planning for a 2018-2021 kind of time frame.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah. I wonder if it's less, I'm just thinking out loud here, take one of the ones like HPD+ that has not been widely deployed yet and say, if you are approaching this using the core, how would you do it? Or the CX...whatever that other one is, the content discovery...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yup.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...discovery...resource discovery model, whatever that's called. That might be one where you would...we could propose an alternate for something that has been standardized, quote unquote, meaning it's come out of the profiling bodies or the SDOs, but it hasn't been widely implemented yet as opposed to taking on something like Direct, which certainly could be redone, but to specify how you might redo it is just going to invite reaction. I don't know, just thinking out loud.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yup.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Or...yeah...I mean, you could imagine something like the document query model of XCA describing a transition to MHD v2 which...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Perhaps.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...allows you to not have to change anything on the sender or receiver, but it moves you in the direction of using a RESTful service and then saying...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...once you've got that in place, then adding in discrete element queries is...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

And that's where I was going at the non-normative examples; we're not saying this is what you should do, we're just saying, here's something you could do...here's a way this could work and we're going to require a lot more discussion relating to that.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right. And then regarding the national infrastructure components?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

That's the one I was having my second thoughts about and wondering if that's not really the APIs workgroup's call.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Right, because it's turfed...it is turfed to IO right now.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah. I mean, in other words, if their decision was made, yes we need one, then the API workgroup would maybe have some opinions about how to build it, you know, what would be the...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...what orchestration patterns are missing, if there's one missing, or which ones would you leverage?

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That's right.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

You could imagine, provider directories being an App, you know.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

So David, I'm conscious that you and I have been talking non-stop and I want to a) see if Janet has comments and b) see if Josh is back online.

Janet Campbell – Software Developer – EPIC Systems

I'm good.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

And no Josh; all right, I think we're then at the end, is there another slide? There is our open public comment slide. Yeah, that's what I thought. All right, let's go back. So what I propose here is that we've framed up a way of thinking about recommendations and we have a read-out, I believe Michelle is required for the March meeting, is that right?

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

You have until April.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Until April, we get until the April meeting, that's great. I'm so happy.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Oh, we can take a vacation.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, well I've got another workgroup where I'm doing something for the March meeting, so that makes me so happy because I was thinking about writing two recommendation letters at the same time.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

But remember, there's a document that might be released you will start to work on.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

This is true.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

That's right.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

I know we're not going to have any lack of work. But, what I would ask as...what I found is really useful is to spend at least one full meeting, and that might not even be enough, actually commenting on the recommendations letter itself. So what I would ask as homework for all of the workgroup members who are on, as well as we'll assign this to those who were off, is to review the framework we put together, make any comments and suggestions that you have relative to that framework. We might want to put in place the edits to...that we had on this slide 13.

And then we will work to draft a formal recommendation letter and spend the next meeting going over that recommendation letter. And to Jon's point, we probably want to be answering all of the questions that the ONC teed up for us to answer, but we may do so, to David's point, in the context of the broader framework that we put together. Is it a good plan?

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Works for me.

Gajen Sunthara, MS – Presidential Innovation Fellow – Department of Health & Human Services

Yes.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right. Janet?

Janet Campbell – Software Developer – EPIC Systems

Sure, sorry, I'm having trouble with the mute button, sounds good.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

That happens to all of us. All right, with that agreed, then I would suggest that we all hand ourselves back and extra 20 minutes and proceed now to the open comment period...the public comment period, unless there are any other workgroup comments that we want to be having.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Let's open it up.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right.

Public Comment

Caitlin Collins Chastain – Junior Project Manager – Altarum Institute

If you are listening via our computer speakers, you may dial 1-877-705-2976 and press *1 to be placed in the comment queue. If you are on the phone and would like to make a public comment, please press *1 at this time.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right, and while we're waiting for our commenters to queue up, can you, Michelle, remind me what the next date is for the meeting and...because we're probably going to have a lot of homework between now and then. I think we're going to want to draft...get through drafts of the transmittal between now and our next meeting.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Umm...

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Or do we...we don't have to do a transmittal...

Janet Campbell – Software Developer – EPIC Systems

It looks like March 12.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

Yeah, you have March 12 and 26.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

We...we're best, my experience is that we're best served doing a more formal transmittal, unless we're going to consolidate...I don't know Michelle if we're going to consolidate all of the Standards Committee feedback in one formal transmittal or whether we're best served like writing our own transmittal section relative to the interoperability roadmap.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

It's up to you. In the past, for documents like this, we have done just one letter for all the different workgroups that are responding. But, if you want to make sure that you don't lose your content...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

...you can put together your own.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

I have found in the past that actually focusing on the transmittal language is really clarifying, because you say something in a PowerPoint slide and it ends up maybe a little different when you transmit it. Do we have any public comment?

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

We have no public comment. But, you're also setting the bar very high for the other workgroups.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Of course.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

So I'll let them know who to blame...no...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Of course.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

I think he just volunteered to write it, too.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yeah, I probably did. Micky is the master at this and I'm just following...Micky has set the high bar and I'm just following in Micky's footsteps. But you've got to admit, David, the JASON joint Task Force stuff that was pretty critical.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Yeah it was, no, and I'm...I totally agree with the point that if it's written, people can read it and understand it and follow it; but I think we can summarize this in a written form...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

...yup.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

...that's not too complicated. And just annotate around the slides, in some ways.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

Yup. Great.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Just one more...

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right, well thanks all and Josh, if you just rejoined the call, you get an extra 20 minutes. If you didn't, then you still get an extra 20 minutes but you don't know about it.

Michelle Consolazio, MPA – Federal Advisory Committee Program Lead – Office of the National Coordinator for Health Information Technology

We will follow up with next steps for all those that weren't on this call and those that were in and out during today's call. So thank you everyone, we really appreciate it.

Arien Malec – Vice President Strategy & Product Marketing – RelayHealth Corporation

All right, thanks everybody. Bye, bye.

David McCallie, Jr., MD – Senior Vice President, Medical Informatics – Cerner Corporation

Bye, bye.