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RESOURCES

OPUS Solution Environment

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Siva Umpathy: Jerry explained a lot about business options, fields, workflows, pages, menus. These are all the backbone, right? Now, there's a lot of technological innovation in an iPhone. There's a lot of technological innovation in Ferrari.

I'll switch to Ferrari and any of the European cars, but do you love it for the engineering and technology? Do you love it for the ease of use? Do you love it for the fun of driving that car, the fun of using that phone, and more importantly, the power that gets you to running the app, drive fast, and all those things?

We took those cues, like an iPhone, like in Ferrari. We built a fantastic technical platform, but at the same time, we took the cue of putting that power in the right shape. What it did is that we packaged that wonderful power in the form of OSC, which is an intuitive no-code interface.

OSC is like your iPhone. OSC is like your Ferrari, very fast. You can use OSC to create and configure solutions in a very, very easy manner, but at the same time, like a powerful car, you can achieve great powerful capabilities using OSC.

Now, with that introduction about OSC, I'm going to show you three things today in this session. We'll start with what is configurable. Number two, where do you start? Number three, how can I do it? And how can I do it is going to be more fun, because we are going to have videos.

Let's start with what is configurable. Let's all take a step back before we jump deeper into the actual platform. Let's take a seat of end-users. We have users on OPUS platform who are licensed Mint. They come in and they log in. We had Bob talk about Ensemble, the great green TraceLink navigation bar. That's where they start.

Once they go and pick a network, hit Go, they start experiencing the solution. The end-users start experiencing the solution. It starts with this menu of business objects. They can see the business objects, click on them. Clicking on them gets you the page. They can handle the data. Then they get operations on the page. The operations bring up push panels. That's the end-user's view.

Now let's switch the table, think of yourself as the solution designer. If you are the solution designer, what can you do? Let's start from here again. You have this menu. This menu is

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inside the solution. You can configure this menu.

You can choose what you want. You can remove, you can add, you can make them point to a different page. Then you can jump into the page itself, which is the most powerful thing. You can drag and drop field into this.

You see all these columns? They're all dragged and dropped, but it's not simply drag and drop because you will hear drag and drop a lot. But when you drag and drop a field, we do a lot of magic behind it. We actually go and create every query needed behind it and make it work. All you need to do is drag and drop, save this page, it starts working right away.

Now, on top of that, you get the page operations. Now, to make it simple, I'm going to say operations are like APIs. Now, you have fields, there are APIs on the business objects. These page operations help you deal with this page data, but they also give you API. I want to export my purchase order. That's an API. I want to follow a task. That's an API.

Now, what's the big deal about it? Well, some of this buttons or what we call operations. I'm going to interchangeably use buttons and operations because it's going to take a while for you to get to that. These come automatically on the page. You just need to, like, hey, do I want it or not? Beyond that, you can drag and drop an API onto a page.

Now I'm going to step back. If any of you have used a drag-and-drop system or no-code system, have you ever heard about dragging and dropping in API?

[pause]

Siva: I assume not. You can drag and drop APIs, which we call operations. And they automatically come as buttons. Like Bob said in the morning, you drag and drop a date field, you get a date picker. You drag and drop a person field, you get a person entry. Like that, you drag and drop an operation, you get a button.

Now, most of these operations doesn't have inputs, but some of the operations do. What happens? That's where this comes up, the push panel. That gives you all the inputs of that operation, and the end-users can interact with it.

But what you as a solution designer can do, well, you can also design that. The way you design your main page, you can also design your push panel. When you drag and drop your operations, you can design them.

Fundamentally, you can configure all aspects of this. You can build them from scratch. You can take something that is available. You can modify. Everything is possible. Now this is something truly not available in any other systems. And that's why I'm excited to share this with you, and I said you're all lucky to hear this for the first time.

OK, now we saw what can be configured. Let's now jump into where can we start. OAC offers solution environment. Right in the middle, we have solutions. The solutions is a box. That box contains pages, menus, roles, and everything which we'll see soon. And the visual manifestation is what we saw in the previous slide.

Now, there are 3 things we have to talk about. In the morning, we both talked about apps or headlabs, everything else comes in solutions. When an app is released, let's say Mint is releasing their app, the app is also shipped with something called a standard solution.

Standard solutions are solutions that are developed by the same app developer and they come with all the functionalities. And fun fact, they use the same no-code interface to build up. Not coding, the same no-code interface.

When a customer licenses Mint, for example, they also get the standard solution. They get to use the standard solution out of the box. A standard solution usually solves a specific problem, a wider problem across our customers, but our partners know different customers,

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different problems.

That's where we enabled our partners to build different solutions for different use cases and put them in the marketplace. We call them marketplace solutions. Our partners can go create solutions from scratch in the same way our internal developers do, using the same no-code interface, and then push them into marketplace.

But what happens? Our customers now have a versatility of choices. Our customers can go pick the standard solution. Customers can look at different solutions that is available in the marketplace, pick them, and use them.

The power doesn't stop there. Every customer would have different kind of scenarios. Once they pick some solution, either from the marketplace or standard, they think, hey, I want to make some changes. If you're using Google Drive, what you do, you look at a document, "Oh, I like it," you do a Save As, and then you can make changes to that.

Very similar to that, our customers or partners who are working with our customers, they can go to this thing called catalog, look at all standard and marketplace solutions, browse them, pick them, and do Save As. It is as simple as saving a Google Doc.

You Save As, you get a fully exclusive copy of that solution for that company. You get a copy of everything. You just go and make the changes using our no-code interface. That's where you start to configure your solutions. We saw what you can do.

We saw where you can start, so now we'll start into how to do this. I'm going to go a bit slow in case. That's going to be a very fast demo, so I'll take a step back and so go a bit slow. OK, in order to understand how to do this, we're going to start with a setup.

Kendall Pharmaceutical is an MAH. They work with multiple suppliers, CMOs. The Munro is one of the suppliers here. Kendall actually started with Mint. They started with the standard solution and then we have Sally.

Thanks to TLU, Sally is now certified to use OSE like you. Sally started with the standard solution for Kendall, but soon realizes that there's key unique use cases for Kendall for which they have to configure the solution.

Let's start with where I said that Kendall licensed Mint, Kendall starts with a standard solution. Debbie is a member of Kendall and is part of the process network. What does Debbie get to see? Debbie logs in and then Debbie goes to the process network, and then right there, these are the menus that came from the standard solution. Debbie can look at all the standard menus, and these are the standard pages.

Let's say Debbie is still using a standard solution. Now Debbie wants to go and look at a PO. So Debbie opens a PO, and then right there, Debbie can see the view edit page of the PO. Now I'm going to pause a bit.

There's a view edit page, and the view edit page, you can see the workflow, and then you can see all the fields. They're all nicely organized for the requirements. And you see up addresses and tables and things like that. This is a standard page you get from Mint. This is out there today. If you license Mint, you get this right away.

Sally got feedback from the network users. They said, "Hey, you know what? The standard page is great. It all worked good. There are a few fields that I need to make changes to." Sally, after her TLU certification, logs in.

Then Sally logs in and you go to this place called our main menu. You click on it, and then Sally can see OPUS Solution environment. This is the place where you access all of our no-code capabilities. Sally chooses that, now it opens a familiar tab for Sally, but Debbie wouldn't see this because Sally has the roles for them.

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Let's take a step back. So Sally went to the OSE, Sally went to the catalog, standard solutions, and Sally can see all standard solutions, only for the ones they are licensed to, though. Now Sally can see the Mint solutions and she can see all the versions actually. Then Sally can pick the one. OK. That's the latest. Let me pick that and start configuring.

Oh, a step back. I talked about Save As. So, Sally opened the standard solution, and Sally sees Save As, a fun fact that's an operation on this, and then Sally clicks. Here it is. These are that input. "Oh, I want my own company solution, so let me give a name for it," so Sally gives a name. It's for procurement and payment, and then Sally goes ahead and says, apply.

What this is going to do behind the scenes is like very much like your Google Drive where you save a document. It's going to the OSC will take care of creating a company solution. I'm going to step back a bit. As I said, this runs fast.

Sally can actually, like, behind the scenes, we took the standard solution. We created a company solution. That company solution had exclusive copy of everything. Sally can go into available company solutions and they can see that I got the procuring payments. That's the same name I gave. This is, by the way, real life. This is not made up. This is real product.

Now, Sally now clicks on the company solution, and that's where you see the spinners. Now Sally can see the solutions she created. Then Sally can browse and see they got business objects. These are standard business objects, workflows, and then new pages.

There are three types of pages that Bob talked about in the morning. The new, view edit, search. Now Sally can see all those pages created for this particular solution. And there is menus, like we started with this left hand side, the menus. The menu is the metadata object that gives you that user experience.

The feedback Sally had is that, oh, there is this view edit page for PO. I just want to make some changes to that. Sally doesn't have to build anything from scratch because Sally got an exclusive copy of the standard solution. Sally just goes into her solution, finds the actual page.

I'll take a moment here. You can see there's a page name, External Manufacturing Send Purchase Order. That's a real PO. That's a real PO page, and you can see now that belongs to Sally's solution, not standard solution. That's a copy they got. Now what Sally's going to do is click on it.

I'm going to pass here a bit. Now, look at the main area. Is this familiar to you? But there's one key difference. This is very similar to what we saw, but there's one key difference. Anybody, what's the key difference you see here?

Audience Member: Edit page.

Siva: Sorry?

Audience Member: The edit.

Siva: Wonderful. Any other key difference? You're very close. That's right, but you also see the green toolbar. The edit is in the green toolbar. Thank you. This is our design toolbar. What you see here is the exact page that Debbie saw, the end-user Debbie experienced. But the same exact page is available when I go to my OSC, and then on top, you get the green toolbar. That's a key for you.

If you're a solution designer, green toolbar is the thing for you. You see the green toolbar that gives you all the power to make any kind of changes onto your pages. OK. So, I go to my green toolbar. Then I edit. I look at the page, it looks exactly similar to what Debbie saw when she opened the purchase order.

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Sally clicked edit, now you see that green toolbar turning into something else It has tools, like you go to your word processor, you go to your slides, what you do, you get a lot of content, but you get nice tools to work with.

The green toolbar started with edit, which is a preview, and then you can go to edit. Now it's giving you the actual canvas to do all your work to make your modifications. Those small tools on the top are the tools with which you can make the actual changes.

Now Sally is going to make some changes here. Let's say she wants to drag and drop some fields. Now Sally chooses a section where she wants to add the field. Then she moves, and you can see that tool tip saying drag and drop, and she clicks that.

As soon as she clicks that, she sees the actual fields. She doesn't see text box. She doesn't see date field or text area. That's where now we differ. That's where our system is very different. She sees the actual business object.

Sally doesn't need to know anything about code. Sally just needs to know something about what the business object is, what the user wants. So Debbie is going to say, hey. I need this field. All Sally has to do is go here, find the field, drag and drop. Now Sally picks something.

You can see it's a lot of fields in PO, and it's a real PO we're looking at. Drag and drop. It's a pick list. As you drop, it's an acknowledgment type, and you can see it automatically turned into a pick list. She didn't do any coding. She didn't go and say I need A, A, C, D in my pick list. She just dropped. Everything was available out of the box.

Again, imagine that this is the way it works for anything, date, number, percent, anything. That's the way it works. So she's going to pick and drop something else.

[pause]

Siva: OK. Now Sally is scrolling down and then looking at addresses, which are groups, and then she sees this nice place. Let's take a look at it. What is the difference between what we saw before and this one? We saw a section with fields. We also see something similar as a section with fields. Anybody, what is the difference here? I'll give you some highlighting queues. I'll keep rotating and somebody says what is different.

Audience Member: You can add nodes.

Siva: Yes, awesome.

Audience Member: What is the version history?

Siva: It's not exactly version history, but it's a collection of groups. We heard Bob talking about collections and groups. Jerry also explained a lot about collection groups. Now think about this, if you use Jira, you have comments.

What are comments? They're collection of fields, not text fields, but collection of comments. What you have is a collection of notes. You could drag and drop just a collection, and you get this whole thing. And you get the plus/minus. You don't have to write any code to do that. That's it.

You drag and drop the collection of comments. You get that experience. Save, done. The end-users can go and do it. You have not written a piece of code to make this work.

Sally sees, OK, there's comments. What else is there? Sally can click on the collection and then she can go to drag and drop, now she sees some fields. Again, let me ask you, what is different now? Last time we saw a lot of fields. What is different now? Why do I see only some fields here?

Audience Member: Which can be linked to this group?

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Siva: Wonderful. Thank you. Basically, when you started at the main page, it showed me all the fields. I dragged and dropped the fields, and I dragged and dropped the comments of the notes, so that is a collection of field which had only some fields.

It is only showing me contextually what are the fields that belong to that particular place. Now Sally can say, hey, I want to drag and drop those fields. Awesome. That's it. Imagine I have something called remarks and visibility of remarks. Those are fields. That's it, and this works out of the box. When Jerry talked about we developed 300 screens in few hours, this is how it works.

Now, let's see what else can be done. There's a field here which is party ID value, which is on the standard page. It is down there. Now, Sally got a feedback that Debbie wants this at the top because party ID is more important. What Sally can do is just drag and drop on the top.

This is the most simplest of this, but I wanted to show you the values you get out of using this product, and still I have not shown the full power yet.

[pause]

Siva: You had Bob talk about order line items. You had Jerry talk about order line items, but what is the difference between the notes and order line items? The notes would come up with few fields, my command, the visibility, but your order line item isn't that way. You have several fields, and you have hierarchy. I could have an order line item. I could have delivery schedules under that.

We saw that nodes that appeared in line with plus/minuses. Imagine that you have 50 fields. Imagine having that kind of thing. We thought about all these kind of user experience for our enterprise use cases. He said, if you have a collection of fewer fields, you use that, but if you have a collection of a lot of fields, we have a different experience for you.

You can drag and drop, you actually get a table. When you drag and drop, we have metadata that tells you, is this a smaller collection that gives you list, or is it a bigger collection that gives you a table? That came automatically.

When I dragged and dropped, that came with...Tomorrow you'll see these things as well. When I dragged and dropped, it came with the collection. I can go, I can pick columns for it. Now Debbie said, I don't want the line notes, but rather I want the unit of measure.

Now Sally is removing the line notes. Now Sally is going and picking the unit of measure. This is very similar to what you saw in the notes. It is contextually active. And then they pick, they drag and drop the unit of measure, and you will get that. That's it, and there's no-code. This works.

Now, imagine this, right? I change this. There's a lot of things happening behind. You have to write a query. You have to get that data. Then you have to write some logic how to show it in the table. All this is automatic. That's typically two days of work. It's once a gate.

[pause]

Siva: OK. That's it. That's all the changes. Actually, I took longer to explain this. [laughs] Now, as I told you, it's not even minutes, and to build this entire page, it's 10 minutes. The things that you've not seen there yet, usually you'll see tomorrow morning in Chevy's address.

Let me briefly talk about that. In those cases, you also get some push panels. I also talked about how to design push panels. You'll see how push panels also can be built the same way in tomorrow's Chevy's address.

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Now, Debbie logs in. The thing I didn't tell you is that when Sally made those changes, they're immediately effective. So when no coding, no compilation, no push, change, save, Debbie logs in, Debbie gets it.

Let's see whether Debbie can see that. You can see the party ID value on the top. The party ID value would be on the top. Then we can look at the table. It has a unit of measure, all of the fields, and you will see that Debbie is doing some data entry. She's going to press the plus. She'll keep getting this thing.

I have a warning, even though I said, yes, you make the changes, you get immediately. We give a lot of different controls here. If you want, you can do this. You can make changes and make sure your users immediately get the changes, but we also have our validation. All those steps exist.

You can still make your changes, test it, and then put it for your end-users. All those are available. You might have a simple customer. Now, I know this is a change. Do it. Great. But it's more process-oriented. I want to go through all my validation and complaints. Yeah, you can do that as well.

I'm going to fast forward now. OK, step back. I told you we're going to show you how to do this. We saw how you could change the page pretty quickly. This is exactly the way our standard solution is built, exactly the way the partners will use, and exactly the same way the customers can also customize.

Now, let's take a step back. Again, look at the menus. Well, there's a different unique use case that we solve. The menus offer sub menus, which categorizes your business objects, and then menu items that actually points to a search page of a business object, gets that business object search page over there.

We also have roles. You can grant access to a specific menu item to your role, and that's how the users get to see what menus they want.

Let's look at a use case here. We said this is Kendall. Kendall is working with Munro and their partners. We had a requirement that users from Munro Suppliers want a different experience, different set of business objects, so let's see how to do that.

What you see here is that this is Munro, who's logged in and started with the standard menu they got from the solution. They see all these menus over there, and then there's another partner, Sal Devices. They also see the same menu.

What Sally is going to do is go and open the roles, and right in the roles, she can see all the menu permissions. The menu permissions ties up to what we saw on the left hand side. We go to that menu permission, turn off. That's it. Turn off and then done. Now we got Munro user, pause, add four business objects, now just two business objects, just by turning off that access.

Let's go back and make sure what does the Sal user has because they haven't changed. They get the same amount. You could change what business objects each of your partner wants on your network. That's not where it stops.

Imagine the Munro users have a narrow use case and they want a different experience. You can go and build a search page from scratch, and on your search page, you can drag and drop all your fields. When you drag and drop your fields, you get a different experience.

Here we are going to look at how to build a search page from scratch. So Sally's changing the titles and then she will go ahead and add fields.

[pause]

Siva: And very familiar, you choose this and then you go to your available fields. You look at

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just drag and drop your fields. This is building from scratch because Munro users want information about acknowledgment on the POs. So Sally is trying and dropping those things and the pages built.

[pause]

Siva: That's it. Now, what Sally is going to do is go back to that menu for that Munro user and open that menu and change the page. I'm just going to pause there for a bit and focus here. I chose the menu item. Then I go here. Then choose the page. Now you can see Sally is now typing the page name she created, and she sees the page name, chooses the page name, and saves. That's it.

Like how we saw the side menu change, Sally can also change the entire user experience for a partner. Now, the key part or key message I want to drive here is that it's not just for your owner users if you want a different page. Let me make changes.

Your partner's CMOs, different CMOs need different experience. You can go and build screens for them in minutes, not hours, and cater the experience for them.

Now you can see the Munro user. If you remember before, Munro user logged in. They had the search page. They had...No, sorry. This is before the change. They see PO number stage supplier. I'm just going to refresh that, and you can see that it changed. That's it, minutes again.

Let's take a step back. I hope it was an accelerating ride for you. It was an accelerating ride for us to develop this, and it was an accelerating drive for you know, for us to get this in front of you.

The key aspect here is, as I told you about the iPhone and the Ferrari. Jerry explained all the technological marvel, and then you saw how fast it is to build. The quite important thing for you all to take away is, what is the value you're going to get either as a partner or from a customer company you're going to customize?

The solutions and catalog, this gives you a spectrum of flexibility. You can use standard out of the box. You have marketplace opportunities marketplace options, or you can take and make any kind of changes. You can make these changes in any manner you want. Smaller changes, bigger changes, everything is possible.

Number two, it's seamless configuration. You can tailor any aspects. The menus, the pages, the roles, and I've not talked about a lot yet. You can change any aspects of your solution, and you can configure for your needs.

You have a use case. You don't have to go through coding. Talk to your user, listen what they want in the terms of your business object and your language of communication is not C, Java, JavaScript. Your language of communication is business.

Your language of communication is the business objects. Talk to your user. Ask them what they want. They will tell you, I need acknowledgement type. Just go and do it. That's how you get to do this.

Then the more important thing you also saw is that you could make these changes for different users within the network. You can make these changes for different partners. You can also make changes for different users within the partners. Everything is possible.

The more important thing about unique user experience is that I want to step back again and want you to picture two things. You saw the Mint screens. It had the side menu. It had this page, search page, the view edit page, and the push panels.

If you went to this OAC, the OAC also looked familiar. The OAC did not look like an Eclipse IDE, if you're not there. OAC did not look like a coding place. OAC looked exactly like Mint.

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A side menu, the pages, and I went there. Everything is now the same way.

Every solution in OPUS has the same UX patterns. What this means, you could have different users using different process networks, different apps, they all get the same user experience.

You could have partners who are working with different process networks of US. You can have partners who are working with different process networks of different MAH, your company or another company, they all get the same user experience patterns.

While we allow configuration, we maintain consistency. We maintain patterns and we don't let them violate. This gives immense productivity boost for end-users. We have done a lot of research to get to this part.

[background music]

Siva: And then, nothing to say more. [laughs] It is quick to implement, and it is actually faster than I walked through.

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