

## TelePresence Support and Management



### Cisco TelePresence Cisco on Cisco

*Julie Nordquist:* Hello and welcome to the Cisco on Cisco Seminar. I'm Julie Nordquist, Program Manager IT and part of the Cisco on Cisco team. Today's presentation is the fourth of a four-part program on how Cisco supports virtual meetings with customers using Cisco TelePresence. In our previous segments, we've taken a look at TelePresence technology, Design and Architecture, as well as TelePresence Solution Deployment. Today we explore the support and management of TelePresence. You will see how Cisco IT has developed a support model that is manageable and ensures reliability and availability for high user satisfaction.

I'd like to introduce our technical expert for today's show on Telepresence Support, Suresha Bhat. Suresha is the Manager in Emerging Technologies IT. He's been with Cisco for more than eight years, and he currently manages the global deployment of more than 110 TelePresence solutions to Cisco offices. Welcome Suresha.

*Suresha Bhat:* Thank you Julie. Glad to be here. Actually, you know Cisco has one of the largest deployments of TelePresence solutions. Support and operations must focus on user experience, high availability, and must scale to enterprise standards.

*Julie Nordquist:* So, sit back and enjoy as we explore Cisco TelePresence Support. Let's take a look at the agenda for today's segment.

### Agenda

*Suresha Bhat:* Today we will talk about how Cisco IT has developed a support model to support the large deployment of TelePresence solutions at Cisco. And also, we'll look at how we actually have implemented a metrics support system to measure the benefit of TelePresence and also the support management operation itself.

### Support

*Suresha Bhat:* As you can see having a scaleable, easily manageable and strong support model is key to a successful service. TelePresence even though it's a cutting edge high technology, ultimately it's a service as an IT organization we provide to our customers within Cisco and of course, with partner engagement also to outside Cisco. So, having that very strong support model is very key to the operations of us. And TelePresence support can be categorized into different topics. The first

and foremost is the actual end point itself, the actual solution that's in the room. That's either a CTS3000 or CTS1000 that we have looked at in detail in the previous segments.

And then comes, the whole foundation of network and the Call Manager where these solutions connect. After that, you look at the ambient, surrounding support which includes the room, the lightening and also the sound and peripheral equipment. And once we have taken care of everything in the room then we look at the important, most important part of the support, the users themselves, how do we support their requests, their questions and overall process? And then we look at also the whole scheduling, the management of TelePresence, the call management, the schedule management, the whole operations itself. If we focus on these things and look at how we have implemented a solution and support model for that, it'll pretty much cover the objective for today.

*Julie Nordquist:* What kind of organization supports TelePresence --?

*Suresha Bhat:* Good question. It's a very cross-functional program within Cisco and also for customers. It will be a program that engages different parts of their organization. So we can look at different organizations without our enterprise that support all these components of TelePresence.

### **Support**

*Suresha Bhat:* So, let me introduce those organizations. So, first and foremost is the first line of defense. It's our Global Technical Response Center, shortly nicknamed "GTRC." And this is an organization that most enterprises have to support their desktop operations, all the technical like the computers, the printers and what have you. The advantage is that they are global --

*Julie Nordquist:* Basically a help desk --

*Suresha Bhat:* Pretty good, pretty good, yes, exactly a help desk. And this organization is the first line of support and they take the customer calls. And what we have done is we have leveraged the exact same organization with additional subject matter experts to support that first level of calls. Then we look at TAC which is Technical Assistance Center. And this is Cisco's product support organization that supports not only Cisco internal, but also our customer base. And this organization is well trained to support TelePresence as a product and they also interact with internal organization forces for IT, you know that support the network and the end point and what have you.

And then comes, the Onsite Support Services. Most organizations have an equal end to this organization in their company and this is really the people who really touch the end points, the ones who are on the field, the "hands and feet" as we call it. And we leverage our current desktop support organization that's globally available everywhere where we have an office and where we have a TelePresence room. So, that's really, what we leverage.

And then we also leverage the actual foundation network support organization. We have a very strong and huge network. We have a lot of components on it, so we leverage our current existing infrastructure support organizations to support that. Also, if you know in addition to all these components, we also have to look at the whole room environment, the sound, the light. So, we leverage our facilities organization, WPLS as we call it, Workplace Resources and we leverage that organization as well, to heavily support all kinds of room-related infrastructure related components for support.

*Julie Nordquist:* You mentioned about the foundational support. Do they use the same

tools? Did you introduce any new tools that they use to support TelePresence?

*Suresha Bhat:* In the beginning we didn't. But as we progressed in the deployment of TelePresence, we are introducing network management monitoring, as well as call manager monitoring for TelePresence specifically through our alliance and partnership within Cisco. We have Cisco remote operations, so this is let's say, a Cisco entity that actually manages network and these kinds of things for customers, as well. We have leveraged their own services and they're also coming up with new products that specifically focus on TelePresence. Yes, we have definitely started leveraging their products as well.

*Julie Nordquist:* Great.

*Suresha Bhat:* Yes. We will look at how that is done in more detail in the next couple of slides.

*Julie Nordquist:* Oh, terrific.

### **TelePresence Support Model**

*Suresha Bhat:* Thank you. So I mentioned the organization that support TelePresence, now let's look at how they interact with each other, what kind of support is provided at different levels. Basically, support can be divided into reactive and proactive modes. And then of course, always the management portion of it, and I'll talk about that. So, let's look at how we react in a support cases and incidents.

### **TelePresence Support Model**

*Suresha Bhat:* The foundation itself is the network. And on top of it is TelePresence, the application. And this application is a big application. It is in a room and it's actually an entire full standing or freestanding system. What we have done to initiate all these things going, we have put a second phone in the TelePresence room and we have put our support help desk number, a speed dial on that phone. The benefit of that is two-fold. One is if you have an issue the users can immediately reach out to that phone and contact a live person from GTRC. And second thing is you need to actually continue your conversation further, it's a completely independent voice IP, voice device so you can still have conversation, you can call people, have an audio bridge conversation if the entire TelePresence system is down for some reasons. So, it kind of acts as a backup phone as well. So, that's what they have done.

And let's imagine a situation where the user has an issue or a question and they contact the help desk through that phone. What happens next?

*Julie Nordquist:* What types of issues might they encounter?

*Suresha Bhat:* It could be simple as that you know they have scheduled a meeting and they're in the room, and they look at the phone, the meeting doesn't show up. It could be that they are an hour early or the meeting got slipped. It could also be that they might see bad quality of media from the remote site. Usually it's very interesting sometimes people forget to turn the lights on in the room. So that they think, it's a system issue. So, we need to really prep our support organizations to understand all these types of issues. And in addition, it could be simply they want to have some additional meetings right after or their meeting is running over or you know, they need to block the room or schedule the room to do that. So, those kinds of issues also come up. So, in addition if they probably see a black screen or a blank screen or they see some network congestion messaging and they're like okay, what do I do now? I see a bad network message. So, at that kind of scenario they need to

reach out to somebody who can help them. And these are the types of issues we usually see.

*Julie Nordquist:* Makes sense.

#### **TelePresence Support Model**

*Suresha Bhat:* So, as I mentioned the user picks up that phone or actually just dials it, you know touches the speed dial and it dials the help desk.

#### **TelePresence Support Model**

*Suresha Bhat:* Within 30 seconds, the user will be able to talk to a live person, that's what we have established from a GTRC support function, SLA, service level agreement. The important thing here is that TelePresence is a highly visible, highly interactive solution. And our value proposition has been if you are in the room, you should be able to call with no delay at all. So, if you have an issue you should be able to talk to somebody live within 30 seconds if you really want to save your meeting.

So with that we talk to the live person and that team, the GTRC or Global Technical Help Center is really trained to ask a lot of user related question, eliminate many of the foundational issues, some simple things that could happen in the room. And they're also trained totally through frequently asked questions, you know regularly interval training for this team so they know the product very well. And whenever we release new releases to production or we have some changes to the hardware or software, they're completely educated on that. Today we have in about five SMEs on a global basis. It's really about four to five people available on a 24 by 7 basis in our help desk who are the people who respond to any calls. With about close to 100 units in production that's all the resources we have needed to support that kind of support requirement.

Let's say there's an issue that this team receives and it is really related to the product itself. It's probably about video or audio is not coming through or there's a lot of fluctuation in the picture. So, at that time the technical help desk may not really be able to support very well. This is a time they need to escalate this issue to somebody who can now look at the technology aspects of the issue.

#### **TelePresence Support Model**

*Suresha Bhat:* That's where our Technical Assistance Center comes in handy. This is the team that's so well trained, they're really high tech people, and they support Cisco products end-to-end. They know exactly what to look for. So when an issue gets escalated for example, we see one of the screens is blank. Everything else is working okay, the screen is showing up as on and things like that the issue gets escalated from GTRC to our technical help desk center within five minutes.

So, what we're really talking about is GTRC is really escalating the case to TAC and getting a live person from TAC to answer that question. What TAC does is they actually have access to our TelePresence codecs through HTTP and other device access, so they login. They try to troubleshoot the issue and try to fix the issue within five to ten minutes, again, very important point there. If you're meeting doesn't really happen within the five minutes, ten minutes of you being in the room, we pretty much decide that you need an alternate room to get to and we shut down that unit, try fixing that unit immediately while you have been given an alternative solution. Usually we set up a meeting bridge Cisco's meeting place product actually helps us do that. And immediately we put them onto and maybe a TelePresence room is available next door, in case of sites where we have more than one room. And then we immediately if that is available and get them to that

location, establish that call between the remote location, make sure they're good. So GTRC stays with the customer until that is resolved.

And then the TAC person immediately goes and maybe enabling the solution or just fixing the problem if it is possible, immediately at that point we can actually get the call going. Otherwise, let's say by bad luck something really happened and we need to replace a part of the product, maybe a codec or a mic or something like that. So, we actually issue an automated at the time and TAC stays with the case until that is fulfilled. So, if somebody replaces a mic or the codec in the back of the solution TAC ensures that it's completely operational before closing that case and then GTRC communicates that this particular room is offline for use to all the users.

I want to highlight a couple of things here. We have taken this from the airline industry I can say, if your meeting is going to be affected and let's say the system is going to be shutdown for a couple of hours, there are several other meetings scheduled for the day. Everybody needs to be informed, maybe we will rearrange the schedule, and rearranging the schedule is not that simply because there are remote people involved as well. So, we will try to give them alternatives and give them other TelePresence rooms if available and then meeting options and then inform all the users. We update the website saying that this particular room is down for this many hours and we will get it back up and running in this time. And usually we have a 24-hour turnaround time for part replacement with our service supply chains. So, this is a very involved step-by-step operation. That's how we have done it. And at any point in time both GTRC and Technical Assistance Center were completely, they will be completely aware of where this particular issue is.

- Julie Nordquist:* Now if the room itself is taken offline can people still go in and there and use it as an audio conference with the other phone or --
- Suresha Bhat:* Absolutely.
- Julie Nordquist:* So that they're, at least have somewhere to meet.
- Suresha Bhat:* Exactly. Because also getting conference room is not that easy --
- Julie Nordquist:* Yeah --
- Suresha Bhat:* And very busy alignment, so we definitely use that room for the meetings that are scheduled as an audio bridge replacement or backup option, most of the cases.
- Julie Nordquist:* Great. And we would probably use meeting place for that --
- Suresha Bhat:* Yes, absolutely --
- Julie Nordquist:* With this other product now --
- Suresha Bhat:* Use that one. And definitely a lot of products that are in that conference room are you know collaboration enabled, so you're, effectively your business is not hampered. But our goal is to really get that visual meeting, virtual process going on.
- Julie Nordquist:* Great.
- Suresha Bhat:* Next, let's say there is some issue that TAC needs some assistance. It's a new product feature we have released. And TAC has been trained but they haven't seen the issue before.

#### **TelePresence Support Model**

- Suresha Bhat:* In that case, they actually collaborate with the actual creators of the

product, TelePresence Systems Business Unit. And at this time we have given access to our codes and data center products to just the TelePresence Manager to TSBU specified engineers who work with Cisco on Cisco a lot and they immediately take a look at it. They know the infrastructure. They know the environment. They know the product, how they have behaved, so they can look at the issue and troubleshoot it. Basically there is, you can see that this is Cisco's philosophy eat our own dog food, walk the walk because any issue we face, we know how to fix gets into the next release. And that's the reason we have done such a large deployment and also putting so much of you know proactive steps in taking this kind of solution into a large enterprise like ours. And we have managed and maintained it so well, until now so really it's been a very learning experience, collaborative experience between all the people that are involved in this support.

- Julie Nordquist:* And a big benefit for our customers who learn from our experiences --
- Suresha Bhat:* Yes. And also --
- Julie Nordquist:* Or get the benefit of our learned experiences, I should say.
- Suresha Bhat:* Yes, yes. And that goes into the product. Also, these experiences will also help define support models for our customers as well. How would you like to support, and depending on the number of units you deployed, depending on the services you are getting, it'll help us define all that for the customer as well. So, Advance Services organization that engages with the customer to develop the solution for them takes this learning and creates as part of the PPD methodology.
- Julie Nordquist:* Great.
- Suresha Bhat:* Yeah. Now let's look at this issue. Now we only looked at how a user's issue escalated and how it is responded to. What if we need to something in the room to the equipment, maybe test something physically or if it is related to network or the Call Manager,

### TelePresence Support Model

- Suresha Bhat:* that's when all the communication processes between the various organizations we spoke about, come into play. First and foremost, let's say GTRC determines it is a mic issue and they need to have somebody come into the room and replace a mic. And we have spares available and all that kind of stuff. And GTRC directly issues a spare replacement request to our Onsite Service Support System. And a case is handed over to them and TAC determines okay, this is a replacement and the issue an AMA and the mic is brought in and then is replaced and tested. So the beauty of this is all done operationally. The program, the project team, like our team is not really engaged. We're aware of the issue. We know how quickly it is being resolved, so we can look at it from a management perspective from a service operation perspective and not just you know, okay everybody is running around trying to fix a problem. And so that's usually what happens when you introduce a new solution to your organization, you know the whole program team is like maintaining it, watching it and then and there. That's not how we do things because this model meets the scale.
- Julie Nordquist:* You've already integrated into the existing support processes that are available today within our organization.
- Suresha Bhat:* Perfect. You know we have not only registered all the codecs, they're all HTTP enabled in our call management system. It is also registered into our Alert Management System that is managed by operations support organization. So, even not knowing anything about TelePresence they know that their TelePresence call that a codec is down or up or it's in a call, those kinds of things are available to our

Operations Services Center, as well. And I'll also talk about how we monitor all the TelePresence end points and how we monitor the network that supports the TelePresence as well.

So, predominantly let's say if a small issue comes up at network level, maybe we are seeing a pixelization and both the phones actual remote and local end show package drops. So suddenly, we are now aware there is something going on, it's either the codec or the network. Once TAC determines where the problem is, if it is in the end point or in the network, they determine and they actually immediately dispatch the necessary action. It could be a replacement of the codec or network whereas, you know fixing the network itself. At that time that case is handed over to our Foundation Support organization, we call it INS Inclusion Network Services. They get engaged. Their operations and support team gets the case and the priority level depending on how critical it is and they actually get on resolving that.

So, this whole operation is a well-oiled machine to be honest with you. And what we're trying to do is hone it and try to make sure that even that particular issue we see in one part of the network, we go proactive. Look at all of the pieces and say, okay have we taken care of this? It could be very, due to a lot of things. The video, high definition video is pretty new and on an enterprise level, on an existing enterprise network, it's what's Cisco's value proposition is. So if you compare it to other products that you have in the industry, most of them have private you know virtual networks and dedicated pipe networks, network pipes to take the high definition video, so they're pretty good because there's no, a lot of traffic on the network. But with TelePresence, you know everything is email, voice, downloads, everything is going to the same network. Of course, we have TelePresence priority queued but really speaking, it's all together. So, somewhere, something could go wrong.

*Julie Nordquist:* Sure --

*Suresha Bhat:* So, knowing that really will help us in doing this.

*Julie Nordquist:* Great.

*Suresha Bhat:* Now, let's also look at, this is good about all user reported incidents and issues that you find in the, so we are reactive, we are reacting to the issues. This is a reactive model. We also have proactive support model where we're monitoring every end point, monitor the network and see if there are any potential issues and how we resolve them.

### **TelePresence Support Model**

*Suresha Bhat:* A bit busy there, but I can tell you it's very simple. We have leveraged Cisco Remote Operation Center which is C-ROS, which monitors the network and a lot of devices for us. They also do it for our customers.

So, what we did is we leveraged one arm of Cisco, that's the service and leveraged them internally for our own TelePresence service. And C-ROS not only monitors the codec but also they monitor the peripherals such as the cameras, the mics, so everything that's honorable, the projector, everything they look at it through the Cisco TelePresence Manager. And they're also developing additional product that actually goes into the details of it. And they also monitor the network, routers, switches on the pad, let's say if you are having a call between Dublin and South Fork, Michigan and we can look at where, how the traffic is going across. We have NetQ, you know QRS for the QRS monitoring, so we know how the network is fluctuating, what is the total on that network, all, that is monitored by C-ROS, as well.

And protect, you know, preventive maintenance is very important in this case. So, let's say we have pretty important meeting scheduled for the

next business day and C-ROS identifies a potential issue. They do not see a camera responding in one of the sites. So, they immediately alert TAC and TAC looks at it and they actually get into, yeah, maybe it's just turned off or maybe it is not working. So, they issue, an automated, from the program team and also GTRC where they can inform the customers and the clients who are going to be in that meeting.

- Julie Nordquist:* So, they can initiate that reactive model.
- Suresha Bhat:* Absolutely. No, it's more of preventive maintenance --
- Julie Nordquist:* Well, they're proactive but --
- Suresha Bhat:* Yes.
- Julie Nordquist:* Good, but using the same processes that are on the --
- Suresha Bhat:* Correct --
- Julie Nordquist:* Reactive side --
- Suresha Bhat:* Correct. The processes are all the same. It's where you actually initiate them. It could be from a user. It could be from our preventive monitoring and maintenance. It could even be from looking in future, let's say a scheduled meeting is coming up. We can initiate, okay let's make sure everything is good for the next meeting. You know sometimes it's high profile meeting we have, business dignitaries, national leaders coming in, we want to make sure that the site is good --
- Julie Nordquist:* Sure --
- Suresha Bhat:* And user condition it, it's not necessarily the foundation, it could be simply, do we have any dust on the plasma --
- Julie Nordquist:* Right --
- Suresha Bhat:* You know somebody has, when gone in and touched the plasma screen and now you have a nice fingerprint on the plasma screens. Believe me there are a lot of those kinds of things that happen. These are very exacting times and exacting products and simply put one, I'll just mention a simple scenario. We have this in 100+ locations in small sales offices and what have you. You know they actually clean the rooms in the night and janitorial staff doesn't probably know they should not touch the plasma screen. They see a lot of dust sometimes and they just go, boom. So we have to put a lot of preventive maintenance and information out there, do not touch the plasma screen. Do not use wipes around them to clean them, so those kinds of things. And these are very simple things and we have already put it into our guidelines as so. So, you know we definitely want to make sure everything is good. So, that's a lot of those preventive maintenance type issues are also handled from the process perspective.
- Julie Nordquist:* Interesting.

### **Support**

- Suresha Bhat:* Yes. It is a very interesting solution. Now let us look at in summary what we do and how all of this support model and the processes help in enabling the service and also what do we get out of this. What kind of metrics do we generate? So, if you can look at the overall, this is we have preventive maintenance, monitoring and management of all the services. Let me talk briefly about the manageability of the processes. We have the whole one-click scheduling and one-click initiation of the call process implemented. That includes as we have seen in the design section various components like outlook, entitlement. And then you

have the phone itself which shows the meeting and the post-meeting survey and assessment. All of this entitlement measurement process measures the value of TelePresence. Now you've got to take that value of TelePresence and then use the utilization and availability of TelePresence to measure the total value.

So, support metrics such as availability looking at those monitoring and management systems, we can look at any 24 by 7 timeframe, how long or how many hours the system was really available for making the call and was the system down any time, how long was it down, was it a created component that was involved in a collaboration or is it a non-created component such as a table, maybe a table piece is being replaced. It doesn't really hurt the call. So, those kinds of issues need to be identified. Then we also look at from a support metrics perspective, overall issue types, where, which location is having the issue, which pair of cities are having the issue. It's possible. That tells us, all these metrics tells us where we should focus our attention. It could be a network between London and New York where we probably see a lot of issues. And let's us immediately focus on what's going on in the network path or is there anything we need to worry about or if you know figuring a lot of calls, from users in a few locations. So we apply the ABC principle to focus our attention and that learning goes back into developing the product and making it better.

So metrics are very, very critical from a support standpoint. So, one of the key things we focused on is implementing the metric process up front and measuring it and reporting on it as well. So, totally support engineering is not just about putting the process for supporting the TelePresence there and environment the users, but also collecting the metrics and driving your entitlement which adds to the value proposition and then also making sure your operations teams know where to focus their attention. Most important of all, user comes first. So, we've got to train all our support people to be very user friendly, really understand the issue, you know get to the core issue within the 30 second to 40 second timeframe so we can initiate the reactive support model. So, that's really the key here.

- Julie Nordquist:* I think that's one of the, I think one of the most important things I've heard here is if you don't get your meeting started within five to ten minutes, then it's going to be a real problem --
- Suresha Bhat:* Yeah --
- Julie Nordquist:* Because it probably won't be an effective meeting. So, it's great that you have an alternative to get those meetings started and then a process to actually fix the problem --
- Suresha Bhat:* Well, summarized --
- Julie Nordquist:* Very quickly --
- Suresha Bhat:* Actually, so 30 seconds to get to the person. Five minutes to get to the root cause, within 10 minutes you have an alternative for the users in the room and also from a part replacement standpoint, 24-hour turnaround, the next business day. That's a SmartNet contract Cisco offers to customers as well, which we have ourselves used and we have actually leveraged it many times. So, everything you know comes in handy. Also, proactive maintenance on a pretty regular, like we do about 48 hour proactive maintenance survey of all the end points, it helps us see how often or where we need to focus our attention. And weekly, some of the metrics we review as the program team we actually look at those metrics, all the end points, where the issues are and then tally that with our entitlements information. So, simply an example here if our, one of the rooms is heavily utilized and we have a few types of issues always recurring, it is immediately evident we have to do

something about it. So, it could be awareness where people are always complaining about ad hoc meetings happening. Those are also issues we need to deal without scheduling, if you do meetings; you're losing valuable entitlement information, as well.

*Julie Nordquist:*

Right --

*Suresha Bhat:*

Not that we want to prevent it, but we want to identify and coach those people, hey it would be great if you scheduled the meeting so we can get some valuable information out of that. So, initial adoption is very, very critical. Most of the times, user related issues are around, how do I schedule? Where is my TelePresence room or does that particular site have a TelePresence, does that site have a TelePresence room? Because you have to have, two end points to have a call. And so we have created a website where we publish all our TelePresence availability locations, the sites that are coming up, when are they coming up and then also if there is any delay that information is published, phone numbers are published, the room names are published and we take the opportunity to publish that information into all the sites, the building locations. In addition, we have put a quick reference guide, it's a one page summary of key bullet points of etiquette and support information into the rooms next to that wall phone where we actually have the speed dial configured. And outside the door, we have some etiquette information posted as well. So, you feel going into a TelePresence room, we request you not to take food and water and spill it on the table, those kinds of simple things. But it's really the being visual, being out there, having it out there for users to always look at and learn.

*Julie Nordquist:*

Continual education --

*Suresha Bhat:*

Exactly --

*Julie Nordquist:*

For your users.

*Suresha Bhat:*

Education happens in many forms and ways. So, all opportunities have taken, we have taken that to get the best practices back out there --

*Julie Nordquist:*

I know you were also use; we have a news feature that comes to your inbox for IT news. You always use that quite frequently to, yeah --

*Suresha Bhat:*

Well you noticed that one too. Yes, we use that heavily to publish the new sites and etiquette information to the (*crostalk*) --

*Julie Nordquist:*

That actually helped me set up my first TelePresence meeting --

*Suresha Bhat:*

That's great to know, actually, so it's working then. That's good.

*Julie Nordquist:*

Yeah.

*Suresha Bhat:*

So, that's pretty much, that's what I have, any other questions?

*Julie Nordquist:*

No, no more for me.

*Suresha Bhat:*

Great. So, I think we are closing the support session for today. I will be glad to see you next time.

### **To learn more about Cisco IT experience**

*Julie Nordquist:*

For additional information on Cisco TelePresence or to learn more about other Cisco IT experiences, the Cisco technologies and solutions, please visit the Cisco on Cisco website at the URL you see here now. This website gives you access to more than 100 case studies and operational best practices on a variety of Cisco IT deployments.

**Slide 15**

*Julie Nordquist:*

We'd like to thank our viewers for spending time with us and being interested in the Global Technologies Seminar Series. We hope that you've enjoyed this program. See you soon.



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