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Operator: Ladies and gentlemen, the presentation is starting. James, please go ahead.

Mr. James Hilliard: Thank you and welcome, everyone. Thanks for taking time to join us for today's presentation. James Hilliard here with you, moderator for this event – Low-Risk MQ Migration Strategies: Avoid the Big Bang. This event is sponsored by IBM, also brought to you by Ziff Davis Enterprise, and as we get started I want to invite all of you, including Bob out there and Edwin, Ron, we see you on board here today, Mark, and Jay. I want to invite all of you that have joined us today to submit any questions or comments you have as we go through our presentation. We'll mix in a few of those as we move forward and we'll definitely have some time for Q&A at the end. Just use that Q&A widget and make sure you click the submit button, and we'll get your question in the queue there. Otherwise to interact with us you can use the Green Resources widget, that'll download a copy of the slides for you. You can also tweet or directly post some information that you find useful to social media sites that you can share with some of your followers. Just click on the Share This Widget. All these functions, you can enlarge them, you can collapse them. You really can make the look and feel of the console your own, so feel free to poke around there; and if you have any issues on that front, you can always type in a little quick note to us and I can chat a note back to you and help you out if you need it on that technical front. For our event for the next 50 minutes or so, we're going to be spending time with AJ Aronoff. He is the Connectivity Practice Director at Prolifics, which is a premier business partner of IBM. He is our guest and our guide today, and again, a lot of information that we're going to go through. Prepared comments will probably go about 45 minutes or so and then we'll be able to dive into that Q&A. So get those questions in to us early and often, and AJ, with that I want to welcome you, sir. Thank you for taking time to join us for this presentation, and I'll turn things over to you so we can begin our story.

Mr. AJ Aronoff: It is great to be here today. I'm looking forward to talking all about MQ migration strategies and I'm also going to offer a sneak peak at MQ 7.5. We should be on slide 3 now. I'm going to hit the next slide to go the agenda. On slide 4 for the agenda, we're going to go through today's MQ infrastructure. We're going to go through the migration basics. I'm going to tell how to choose between MQ 7.0.1, MQ 7.1, and MQ 7.5. We're going to go through migration strategies. I'll even talk about how we can do multi-version install. Everyone finds that doing upgrades is a pain, IBM realizes that, and how starting from 7.0.1.6 onwards, we're going to make it easy for all future upgrades. I'll give you a sneak peek at MQ 7.5 so we'll make the idea of doing these upgrades more exciting, and even discuss some next steps. Next slide please.

We're going on to slide 5. This slide just tells a little bit about customers. You know, the secret to success is always working with wonderful customers. We like working with everybody, and for anyone who would like some assistance with migrations, it is our pleasure. Moving on to slide 6.

The Migration Basics. Before I dive into this, the idea is any time you make a migration, any time you make a change to your system, you're taking some risks. On the next slides I'll tell you a little bit how to defend yourself, how to make sure that everything goes right, everything goes as expected, and if it doesn't, how to deal with that. The prerequisites have changed. MQ 6 was five years ago. What we are doing now is we're saying, "Okay, for MQ 7, 7.0.1, 7.5, we can handle all sorts of new versions." There are new minimums. You know, we are expecting new things. Always check the new prerequisites. I'm going to go into some detail on the saying, you know, "Okay, for the future, how can we have multiple versions of MQ running on the same machine?" That'll make future migrations much, much easier. This migration will be a bit of work. We're going to do our best to make all the future ones much easier. There are really two main things to watch out for – maybe three main things – to watch out for when you're migrating off of MQ 6. Publish and Subscribe are different. In the old ways, it was done with a Message Broker. There are some specific things you need to watch out for there. For JMS, there is a new JAR file you'll need to use, and I go through that in detail, and there will also be some additional stuff for clustering. Next slide, please.

On slide number 7, Migration Basics, here's some general things about the migrations. You have to do a full system backup before you do the migration. There is really no way back. When you're going from MQ 6 to MQ 7, certain things will change. Only by copying all of the data and all of the log files are you safe. I would recommend just copying all of RMQM. Do you have to copy the binaries? – Perhaps not. You know, you can always do the uninstall and reinstall. Some people actually like to just copy the whole machine, then they know they're safe. There's an excellent manual, it's the second bullet point here. I included the URL. It goes through everything in details. There's a wonderful support pack – and all the supports packs that I mention are free – called Save Queue Manager, a great way to save all of the object definitions, even all of the permissions, and replay it. It makes it very easy at times to create queue managers. Next slide, please.

Moving on to slide 8, we should always conduct thorough testing. One of the support packs is Q SupportPac, Queue Load, and Queue Unload. What these do is they make it easy to put 100 or 1,000 messages on to queues. They can check all different types of permissions. They can go in client mode or in binding mode. It is a wonderful testing tool. Some support packs are no longer used with MQ. The PubSub SupportPac, certainly with SOAP, and the MQ Classes for JAVA and JMS are now built in so before you migrate to MQ 7, you should remove these three support packs. Next slide, please.

Again with the Migration Basics, we need to make sure that all the prerequisites are up to speed – they may very well have changed – and less is more. Simple is better. This is not the time to introduce any changes into your system. What you want to do here is say, "Okay, we're only going to do the migration." If you are planning on doing any fixes, any other changes, do that before you do the migrations. No one likes coming in on the weekends. No one likes having multiple roll-outs, but when you do a migration, it's best to do it completely stand-alone. That way you know the problem was because of the migration not because of anything else. Adding on the little graphic at the bottom, you know the apple with the smiley face – an ounce of prevention really is worth a pound of cure. Do

everything you can to test things in advance. Actually go through the migration on Dev and UAT. Production is not the time to find out, "Oh my, I didn't expect that." Next slide, please.

Migration Steps – We're going to stop all the channels before we do anything. We're going to basically pretty much stop everything. We want to be in a complete stop state. That was also important when we made the backups. When you make the backups, you need to make sure the queue manager is down. Essentially, unless you have high availability, migration is going to require considerable down time. Shut everything down, back everything up, that's the only time we should consider doing the migration. Next slide, please.

Mr. James Hilliard: And AJ, as we move on here, I just want to remind folks like Melissa and David and others that have joined us since the beginning, a lot of these slides have some graded details for you to follow. You can download a copy of the slides and that resources icon, the Green Resources on your player. So go ahead. You can download those so you can follow along and refer back to these documents after the event so you're not having to take so many notes throughout the whole time. Also a reminder, we've got a couple of poll questions. The first one's going to be coming up, popping up after this slide. We're not going to be addressing a lot of them but when the polls come up, just go ahead and answer those polls. We'll collect those results and we'll probably come back to a few of those results during our Q&A time, but wanted you all to be aware of that as we now continue on and look at some more of these migration steps, AJ.

Mr. AJ Aronoff: Thank you very much, James, and again, on the first slide and the last slide you have my email – aj@prolifics.com. First slide and the last slide to make it even easier if there are any questions. There's another email – migrations@prolifics.com. They will try to answer things. At the very last slide we will also say here is a URL where we give additional assistance for migrations. We'll probably send that URL as well in a follow-up email to everyone.

This is part of the most important steps. When does the migration actually happen? It isn't only uninstalling the old software and installing the new software, and by the way when you do that, make sure to preserve your queue managers. When you do the uninstalls, don't say remove the old queue managers. You definitely want to keep them. But there are two commands that – or three commands – that actually do the migration itself. "strmqm –c" is going to create all the new version 7 queues. When we migrate from MQ 6 to MQ 7, we're actually going to keep all the old MQ 6 queues. The command "strmqm –c" says okay, I'll create all the new 7 queues now. Finally when we run that strmqm command without the "-c", that's when we are really creating and converting to the new version 7 format. There's no going back. Uninstalling at that point isn't enough. If you have problems at that point, which we'll go over in the next slides, you'll have to actually have to use Queue Copy, Queue Load, Queue Unload, free support packs to move them off and go back to the backups you carefully made previously. Now would be a wonderful time for the poll questions.

Mr. James Hilliard: Then again, that ought to pop up the first one to everyone. We'll continue on with the content here but this is up for everyone as a pop-up and you can answer all that applies here, which

of the following products that you'd like to migrate there. And as you do that, folks, we'll continue on with AJ.

Mr. AJ Aronoff: Wonderful. Do take a few seconds to do that. We are interested in helping anyone who does require assistance and we want to tell you all about the new features as well. But first, Murphy's Law: things always go wrong, you know, so we're now on fallback considerations. If anything goes wrong, we're going to stop everything, and we need some way of preserving the messages that came because we're probably going to have to put them back as we restore to MQ 6. If anyone looks in Google and types "MQ SupportPacs" you'll see 100 different MQ SupportPacs. They're wonderful. They're used by everybody. Two of the best support packs, at least two of the most popular ones, are the Queue SupportPac and Queue Load and Queue Unload. Any of those support packs can be used to move messages to a file or move messages to different queues. Now we basically have a way of preserving things so when we go back to MQ 6 – you know, hopefully you'll never have to do that – but if you have to you can, and you can handle any new messages. Next slide, please.

More fallback considerations – we're going to use the old backups. We're going to uninstall MQ 7. We're going to reinstall MQ 6, reapply all the Fix Packs. You had to have made a complete backup of VAR MQM including VAR MQM Queue Managers, VAR MQM Logs. If you have symbolic links elsewhere, make sure your complete backups include the backups of those remote disks, and again, all the backups you take should be when the queue memory is shut down. The existing messages from the queues need to be removed. We can start up the queue manager; make sure everything's working right. Only persistent messages are preserved. We can replay the messages which we saved using Queue Unload and now restore them using Queue Load. Next slide, please.

Okay, which is the best version of MQ to upgrade to? To be honest, less is more, you know. People should think about a relatively small and easy upgrade. 7.0.1.8, wonderful Fix Packs. All the bugs people have encountered with migrations were encountered long ago. You know, there's an old rule for paranoid people, you know, "The zeroest version of a product is worth nothing." So you always have to be very careful with that. On the other hand, 7.0.1.8 has been thoroughly tested, everyone loves it. No major security changes. That's the easiest version for migration. Security – there are a number of people in the audience here where security is the most important thing in the world. MQ 7.1.0.1 has major new security features. It's wonderful. It gives you new security policies. It's one of the greatest things to happen to MQ in a long, long time. If you are looking for new security, 7.1.0.1 is probably right for you. 7.5 is absolutely the latest and greatest version of MQ. Later on in this presentation I'll talk about advanced message security. I'll talk about MQ file transfer edition. If you are looking for new MQ features and easy one-shot install, MQ 7.5 is the right choice. But, you know, sometimes easy 7.0.1.8 is the right way to do. Next slide.

Publish and Subscribe – This is the hardest part of a migration. If you are using MQ 6, you know, PubSub, using the Message Broker, this is the hardest part. Be most careful with this. There's a nice User's Guide. The bulk of the migration happens just by typing strmqbrk. It understands. It's going to go to the new thing. The Publish and Subscribe engine from Broker has been moved into MQ. You don't

need Broker anymore just to do PubSub. If you're doing entire collectives, that isn't supported by the base MQ product. You've got my email at the end. Send me emails if you're in that situation and we can figure out what can be done for you. Next slide.

MQ 7 has a wonderful new PubSub engine. It has all sots of new features, all sorts of new security. It's very nice. It's very fast. And they worked on compatibility with the older versions. There's a new attribute called PSMODE and you can pretty much continue to run the way you've been running by setting PSMODE to the way that you want. On the next slide, Summary of PSMODE, I do mention all the different possibilities, whether you have it set to Enabled, whether you have it in Compatibility mode or whether you have it Disabled. Enabled you get all the new functionality. For Compatibility mode, we're not going to new the PubSub interface. We're just going to try to give you the functionality you've always been using; and you can even disable it. Next slide, please.

Java/JMS – This is one of the most popular ways of working with MQ and it's almost identical between MQ 6 and MQ 7. I don't know how clearly you can see it in the slide. On the bottom there is one new JAR file, so the idea is if you've been carefully moving the JAR files on your own, there is one new JAR file that you need to include. Pretty much that's the only change. Next slide.

So Base Java, now a peer of JMS, they've made it much easier to use. The only trick again was the packaging. They included .com.ibm.mq.jmqi.jar so if you upgrade to version 7 and it says "class definition not found," you know you need to include that one extra jar. And there's one other oddity – the MQException class. They needed to make sure the hierarchy worked right and that's part of the reason why they had to use the new mq.jmqi.jar. Next slide, please.

Okay. You've done the migration. Something isn't working right. There's a new log file – psmigr.log. You can look at that and say, "Okay, what happened?" You can also look in the other log and look at FDC files. There is a wonderful program that comes with MQ called FFST Summary. It'll go through all of your FDC files and say, "What problems am I encountering?" I recommend running that program before doing the migration so you know what problems if any you were having before you migrate, and then if after you migrate you get the same kind of problems, that's not so worrisome. If you're getting new kinds of problems, well, that might be much more worrisome. Next slide.

Okay, the name of this presentation is actually Low Risk MQ Migration Strategies. On this slide we're going to talk about the migration strategy of Swing Hardware. What if you can't shut down your MQ system? What if instead of doing an in-place migration you wanted to lower the risk? One of the easiest things to do is just to have one more machine, you save to manager, copy all the definitions from the old queue manager to a new queue manager that you're creating under MQ 7 on the new hardware. You don't have to do the migration any more. You don't really have to take that risk. If you have 100 servers you can say, "You know what? I'm going to temporarily add 101st server," talk to your IB rep about licensing, build the new MQ 7.1 there, build the queue manager matching your old one. Now you're not really doing an upgrade. You're essentially doing a rollout. You're essentially saying, "You know, I'm going to replace that old piece of hardware with some new piece of hardware." You get to

avoid many of the migration complexities. You get to do a much more thorough pre-production migration test. It's a much lower risk strategy. New slide, please.

Strategies – Cluster Migrations – Avoiding the big bang scenario. It's the last thing you want to do. If you have a cluster changing, everything at one time, it's too horrible to think about. The first thing to do is to migrate the full repositories, and you can migrate just one full repository. The other full repository is all you really need. If something isn't going right, you can shut things down. Because there are two full repositories, you are really reducing the risk. Please migrate the full repository first. At the bottom there is a wonderful tech article by Mr. Beardsmore. It's an excellent article. It goes through all the different things that you can do, but as long as you migrate the full repositories first, you should be fine. Next slide, please.

Refresh Cluster and the History Queue – Refresh cluster is dangerous. Sometimes you have to do it, you have no choice. In MQ 7 they've made things much easier. There's now a cluster history queue. If things some to be falling out if sync, if you are sending messages and the workload distribution isn't right, starting with MQ 7, we have many advantages to make your life better, so there's going to be a lot of good and a lot of benefits to migrating to MQ 7. Everybody loves MQ 7 clustering. If you're in MQ 6, do it slowly, do it carefully. Migrate the full cluster repositories first. Next slide, please.

Monitoring – How do I tell what's happening? Well, there is a command, display channel status, I can use that command to say, "Do I have a lot of messages just sitting around? Do I have something in the existing cluster command queue? Do I have messages sitting on the transmit queue?" If you're making big changes, give it time to settle, take a look in an hour. If you still have lots of messages sitting on these queues, it is something to be concerned about. 1-800-IBMSUPPORT, you know, if something's going wrong that's a good number to have. Always have your 7-digit ID handy if you have to ask a question. Next slide.

Multi Version Install. Wouldn't it be great if I could have multiple versions of MQ on the same machine? Think about how many problems that would solve for me. Starting with MQ 7.1.6, you're going to have that ability. That's one of the reasons why I say the minimum to upgrade to is 7.0.1.8. It means in the future I don't need swing hardware. I can say, "You know what? I'm not going to do an in-place install. I'm just going to build a new queue manager. I am going to have multiple versions of MQ running on the same machine." When I want to finally do my upgrade, all I really have to do is change the listener. I can have much lower risk, much easier migrations, by using multi version installs. In the future, this is going to make a lot of people happy. Next slide, please.

Multi Version Install Concepts – Now the base thing is an installation. When you do the installation, when you do the install of this product, it'll tell you, "Okay. One of these is going to be the primary installation." All the queue managers by default will be part of that installation but on a queue manager by queue manager basis, you can say, "This queue manager runs as 7.0.8.1. This one runs as 7.1. This one runs as 7.5." And then when I'm doing future upgrades I can say, "Okay, the new queue manager that I'm building, that will be with MQ 8." Next slide.

Mr. James Hilliard: And AJ, as we move on, we could push out that second poll that we have for our audience here today, let them vote in on that and we'll come back and share some of these results later on. I also want to remind everyone we're about half-way through today's presentation. Glad to see everyone's still on board with us and in fact a few more folks have joined in here like Sandra and Greg. Mark as well. So if you missed any of the earlier part of the presentation, we've recorded everything. You'll be able to come back and catch up on what AJ has already shared with us so far. And again, we're going to continue on probably another 15, 20 minutes then we're going to open up to your questions, so if you have questions for AJ, definitely get those into our queue and we'll mix in as many of those as we can during the Q&A session. With that, as folks continue on with that poll question, AJ, back to you so we can continue talking about these multi-version installs.

Mr. AJ Aronoff: Beautiful. On this first picture, MQ 7.1 application migration, what I'm showing is everything is running under 7.0.1, both queue manager 1 and queue manager 2. Next slide, please.

On the next slide, suddenly we see I still have everything running under MQ 7.0.1 but I now have MQ 7.1 running on the same machine there on the top right. So all my queue managers are still running the way they were but I'm also having MQ 7.1 on the box. Next slide, please.

Now suddenly I have assigned the second queue manager to MQ 7.1. This gives me tremendous flexibility. This lets me say that I will be able to have my old queue manager, making a new queue manager running a new version. In the future, after I've upgraded off of MQ 6, this is how I'm going to do all my migrations. This would be the lowest risk strategy. Next slide, please.

Finally for this one slide, I now get to say I'm going to exploit all the new features. Again, when you're doing a migration, keep it simple, just do the migration. Don't make any changes during the migration. Either before or after in a separate rollout is the time to make any changes to your system. Next slide, please.

WebSphere MQ 7.5 Contents – We've added a whole bunch of new features with 7.5. We've made the installation process easier than ever. With just a single click of the button, I can install MQ, Base MQ, MQ Telemetry, MQ Advanced Message Security, and MQ File Transfer. It's absolutely wonderful. We have enhanced the cluster queues. I was working with a customer and the bottleneck was there was only one single system cluster transmit queue. Everything had to go through that one single cluster. It was a real bottleneck. Now with 7.5 I can have multiple system clusters transmit queues. I can say, "Use this one for this cluster and here's how we're going to do it." For certain extreme, high-volume applications, it's a wonderful new performance feature. I was recently trying to do some debugging and I wanted to say, "Okay, which client is which?" And of course all of the clients in the little application tag when you run MQSC were just telling me, "I'm an MQ client," no further information. Now with 7.5 they've fixed that. They let me say, "Here's the application." It's a really nice new feature. Next slide, please.

Okay, my little notes – We have all sorts of new features for 7.5. It is an integrated message offering, again, in single install. It's much better than that. By having a tighter install, I can have better security. With the MQ Advanced Message Security, it turns out being able to do something in a single install means that there are no gaps. The way MQ Advanced Message Security works, it really installs three interceptors: an interceptor for MQ Client, an interceptor for JMS, and an interceptor for ==Bi-Mix Mode==. By doing all of that as a single install, no gaps, nice, easy message encryption on demand, even for messages sitting on the queue at rest. For anyone who's serious about security, for anyone who's doing PCI and Compliance, MQ AMS done with MQ 7.5 is the way to go. Next slide, please.

Application Activity Reports – What's going on with my applications? You know, I've just done the migration. Are things working the way that I expect them to? What additional testing do I need to do? How do people currently get their statistics? What MQ 7.5 does is new activity reports. It'll show me everything about data. I can go on a system call by system call. In fact if you go the very next slide, I can even see the reports. Did I do an inquire? Did I do a close? I can get an MQ call by MQ call report on each individual application. This type of information is very, very handy for both performance and debugging. I was working with a customer, performance was not what they expected at all. We found out that they were literally doing an open for every put. That slowed down performance tremendously. A minor change to the code, dramatic speed-up on the code. Next slide.

Clustering – Again, all sorts of new options. We know from previous work with MQ 6 that I can say, "Okay, I'll use certain binding options. I'll use the normal workload balancing options, you know, if I have two queue managers in my cluster I can say half my messages will go to queue manger 1, half my messages will go to queue manager 2. I also had something called bind on open. You know what, I'm going to bypass all of the workload balancing options and I'm going to say, "Send all of my messages to this particular queue manager. Whichever queue manager I go to first, that's where all the messages should go to." It's not a great option. It defeats the purpose of workload balancing. It can mean that I'll get less performance. The reason to do it is because you have some message sequencing. You're actually depending on the sequence of messages so bind on open was important. Now we have a new option – bind for groups. You have some logical group of messages. Maybe that logical group of messages does have some sequence-depending information. You need this logical group of messages to be handled by a single queue manager so I can say "bind on group." Next slide, please.

Okay, this is one of my favorite features. Again, I was recently working for a customer that had incredibly high volumes. They needed to send hundreds of thousands of messages in a very short period of time and they were using clusters and workload balancing, and the thing that was killing them happened to be that everything was going through a single cluster transmit queue. Now there are actually some interesting options in MQ. You can actually set two parameters, and those parameters are the default buffer for persistent messages and the default buffer for non-persistent messages. Of course this particular customer, everything was persistent. They increased the default buffer for persistent messages and that helped but still having everything go through a single system cluster transmit queue – definitely bottleneck. For people who are using lots of clustering, need to do high volumes, bit of lag, this is a new feature that everyone will love. Next slide, please.

We can now define permanent dynamic queue for each cluster sender channel. We can basically alter the queue manager and we can set all the different parameters so now we can say I can have perhaps a single cluster transmit queue for a particular set of cluster channels, and that's just wonderful. That is a very high performance increase, at least for certain users. Next slide, please.

Now we see a diagram of the different system cluster transmit queues. In the old system, I always had one single system cluster transmit queue no matter how many different members of the cluster I had. If I had a cluster with 20 different members in the cluster, still everything sat on that single system transmit queue. Next slide, please.

Now suddenly we see in this diagram, okay, I can actually have a single system cluster transmit queue or a single cluster transmit queue pointing to every member of my cluster. In terms of performance, it can be a very, very nice performance improvement. Next slide.

MQ Clients – For our iSeries users, one of the challenges have always been they haven't really had MQ Client on iSeries. You only really had the option of having full MQ on it. Now I actually have an MQ Client for iSeries and that has made a number of customers extremely happy. Next slide, please.

Java Application Identification – This is absolutely wonderful. I was doing, again, a variety of debugging recently, and in the old days prior to 7.5, if you went into runmqsc and you say, "Display Q status type handle," it'll give you a bunch of details. It'll tell you, you know, you're always working with each individual queue. You can similar things with the channel status as well. But it won't actually tell you what is the name of the application coming in through MQ Client. Now I can do that. Now I can actually say with the new 7.5 Explorer, "Here are the additional details," or with runmqsc, "Here are the additional details." It makes it much easier for debugging and tracking, you know. "I'm getting something I doesn't expect. What is the program that is connecting to me?" We recently had for a particular customer; they didn't understand the number of programs that were connecting to a particular queue. Using that new feature we were able to find out what was the program that was still running that we hadn't expected to be running. Next slide, please.

Okay, you don't have to upgrade everything at once. There is wonderful compatibility between different versions of MQ. I can have one queue manager running at 6, one queue manager running at 7.0.1, one queue manager running at 7.5, everything will still work. The queue managers are smart enough, they understand the protocols no problems whatsoever. With clients, again, we can do similar things. I can upgrade the queue managers first, and that sounds like a wonderful idea. Later on I can upgrade the Clients as well. One particular feature that I love is Automatic Client Reconnect. This came in with MQ 7.1. Automatic Client Reconnect is wonderful. It hides problems from developers. I have a network interruption. I have something not going as planned. No problem. The Client code, starting with 7.0.1, is not smart enough to say, "I'm going to reconnect to the queue managers. I know what queue manager I was connected to. I know what queues I had open. Okay, there was some sort of glitch. I lost my network connection but I will re-establish that and reconnect, and I'll be off-and-

running." Automatic Client Reconnect is also how you work with multi-instance queue managers. For the people in the audience who wish they had high availability, IBM has said, "Oh, great. I can pretty much offer you idle standby licensing for multi-instance queue managers at 80% off." So for customers who want high availability, multi-instance queue managers, automatic client reconnect, are wonderful features; and in terms of doing the upgrade, you can do the queue managers first – that's where the most risk is – and then you can upgrade your clients later on. You won't be able to take full advantage of Automatic Client Reconnect and multi-instance queue managers until you've upgrade everything, but that's okay. In terms of risk, upgrade your queue manager, upgrade your clients. When everything's upgraded, you can get advantage of the new feature. Next slide, please,

z/OS Performance – Everything I've been talking about up till now has all been for distributed systems – Windows, Unix, Linux, you name it. MQ 7.5 is the fastest version of MQ ever. They have done a number of different things to take advantage of new architectures. MQ has been around for 15 years? – 15 years ago machines were small. Maybe they had dual cores, maybe they two CPUs, that was it. Nowadays we have machines with a dozen cores. MQ could now take full advantage of that architecture. There have been some studies where I can almost increase performance linearly with the number of cores for certain special cases. In other cases, performance is completely disk-bound. So know what your bottlenecks are before you say, "Okay, I'll do it this way or that way." That being said, for distributed systems and especially for z, they've been making tremendous improvements. The highlighted point on this slide: they've processed more than a million non-shared messages through a single queue manager perhaps in a second. They were doing 150K shared messages per second with three queue managers – absolutely tremendous performance improvements. So basically in the old days, if you were using a queue sharing group, once you had certain sizes, perhaps more than 64K, performance took a real hit. Moving on to the next slide –

Large Shared Queue Messages – They're now able to get much more performance for larger messages. Today we're going to mostly focus on distributed systems but if you have questions on performance with z, please send an email to me – aj@prolifics.com. I always like pictures – next slide.

Okay, here we go. And I apologize. Sometimes for some reason it seems to take a little bit extra to upgrade on my screen. There were many different ways of doing these things. You could have a queue sharing group, you could have a coupling facility, but there were always limitations. The coupling facility made things pretty much indestructible. Even if you had any problem with the mainframe, hopefully you'll never experience that, all the messages were on the shared coupling facility. Now we can handle much larger shared queue messages removing some of the old limitations that we had. In addition, they've gone through all of the queue sharing group cases, some of the most obscure cases which could have resulted in delay or maybe even unavailable messages – they're all gone now. The better reliability ever and again, fastest MQ ever. Moving on to the next slide –

Scalability and Performance – Distributed Platforms – They've gone through all the different scenarios. We were working with a customer again. We took advantage of larger buffers for persistent and non-persistent messages, got tremendous improvements. The hardware has increased over the years and

MQ can take advantage of all of that. Multicast – there are now ways within a single sub-network to have a different quality of service for PubSub. Multicast is now built right into the product and for certain types of PubSub situations, perhaps market data, there is a 5-to-1 performance improvement. One of my favorite sites, if you go to Google, "MQ SupportPacs" it will show you all the free MQ SupportPacs. It will also show you all the performance reports. If you have any questions on, "Okay, how do I get more speed from MQ?" – This is the site to go. Next slide, please.

Since we are coming to the end, I'll be going a little bit faster. We do have all sorts of new ways of doing management on MQ 7.5. There's a new command – dmpmqcfg – that replaces save queue manager. All the security, everything you want, built right into a built-in command. You would no longer need Save Queue Manager. And we've also made multi-instance queue managers on Windows much, much easier. Before you pretty much had to make Windows machines domain controllers. There are no options so we made multi-instance queue managers on MQ 7.5 easier than ever. Next slide.

The Hypervisor Editions are wonderful. You just start them right up. You don't have to do the MQ Install. They work well with the players. I love the MQ Hypervisor Edition – no muss, no fuss. You can have now even with the Message Broker Hypervisor Edition, pre-build queue managers, pre-built everything, the easiest way to start something new. I mentioned Swing Hardware – you don't really need a new piece of hardware. You can just have a virtual machine do your upgrade to a virtual machine and you can very nice, low-risk system of doing upgrades.

We're going to skip the next slide, since we are imminent of time, so we'll skip the Message Extension for Web Application Pattern. Last thing we're going to discuss is the enhancements to the newly-integrated components. There's MQ AMS and Managed File Transfer Edition – we're always adding new features. The new feature for Managed File Transfer, being able to log to a file instead of a data base is a good one. You can do certain queries. You can basically get all your meta data into a file, do all your tracking, but for AMS it is absolutely necessarily. For AMS please use MQ 7.5. It's more tightly integrated, it's easier to use, and it's strongly recommended. This is probably a good time for our next poll question.

Mr. James Hilliard: Yeah, we put that out there, AJ, a moment ago. Let me actually do this and go ahead and share the results of that, and on that poll we were asking folks there what they thought of, in terms of MQ 7.5 features that sounded interesting to them, and again, we could have multiple options here. You see the two in the middle got interest, so it's distributed systems and then the enhancements to advanced messaged security. As you've been talking to other folks, are those some things that kind of pop up in their responses as well?

Mr. AJ Aronoff: All the time. This particular presentation is clearly towards distributed systems; and advanced messages security, for anyone who's dealing with confidential data, it's a very hot topic. One of my customers was given a simple directive: "Secure all messaging." Absolutely one of the hottest things there is.

Mr. James Hilliard: Right, AJ. Hey, contact information for AJ and team on the screen right now, and again, you can download the slides and the PDF, just use that green icon your webcast console. That's where you can get some of those related resources. I also want to direct you to a survey. You can fill out a survey for us. It's the survey widget bottom right of your webcast player. I appreciate you filling that out before you leave. And before leave, I want to get to a question or two that have come in here for the audience. A few other of the questions we'll forward on to AJ and team, but Sandra asked earlier here, AJ, and stated this, "If I want my message to be compressed on 6.0, if I'm correct, we need to use exit programs. Is that built into these future versions you've talked about today?

Mr. AJ Aronoff: Great question. I will look that up for you. If you send it to aj@prolifics.com, I will check. I know in z there are additional compression algorithms that are built right into MQ 7. I will check to see if those same features are available for distributed systems. If you've been using your exit function, if you are on something besides Windows for example, that should still work. If you're on Windows, you'd probably just have to look at 32 bit versus 64 bit. You can certainly get the compression algorithm to work on any of those things. In terms of compression, the reason typically is performance. You may want the same compression algorithm that you have been using. Certainly use that first. In terms of a migration, let's no make any changes. Let's start with the compression algorithm. The reason migrate in some part is because MQ 6 is going out of support in September 30th so that's the real reason to migrate. Please send me an email or I will just forward to James the answer after I look it up. I know there were various compression algorithms. I don't know if they are on distributed systems.

Mr. James Hilliard: What we'll do, AJ, is we'll make sure Sandra's information gets on board. We can get that information out to her. As well as the other questions, a few others have come in, a little more detailed here so what we want to do is forward those on to AJ and team behind the scenes. We also want to remind you, a couple of folks had asked about a recording of today's event – absolutely, we have recorded here. You can go back to eseminarslive.com. That's where you will find the archive. I also encourage you to forward on the reminder emails that we will out to all of you. Forward those on to colleagues who will benefit from tuning and listening to the details that AJ has shared with us today. That is really going to wrap things up for us. I appreciate IBM, their sponsorship for today's presentation, and again, AJ Aronoff, the connectivity practice director with Prolifics, which is an IBM premier business partner. I appreciate his efforts on today's presentation, and of course, the Ziff Davis Enterprise for this event. Again, I want to remind you that if you missed any part of the presentation, come back, review the archives. That'll be up shortly online. You can also download those slides, and again, fill out that survey for us. It gives us some feedback on our presentations here. With that we are going to wrap things up. Again, my name is James Hilliard, and we do look forward to talking to you all down the road.