Good morning, everyone. Back in October I gave you a preview of where we were with the Future Digital System. At that point we were completing what we called the Concept of Operations, which was a high-level document that was really very conceptual that talked about what it is we really needed to do. It didn't describe in specifics how we were going to accomplish it, or even the detailed specifications for the system. And as Bruce said, we're going through a very methodical process in developing this system. And where we are right now is what I'm about to help you all understand. We've really completed -- nearly completed the next phase of this project which has allowed us to put much more specificity in the expectations for this system.

Back in October I think I described that the process we're working through is one where we created a cross-functional team at the Government Printing Office. Those that had very close contact with Congress and our agency customers that provide content to the GPO, as well as those that were a part of the Information Dissemination Operation that are responsible for disseminating information out. In addition, we had folks from our IT staff, so that they could look at the foundational work that would have to be done to support a new system. And this small cross functional team helped create the Concept of Operations in a very outward-focused fashion of what it is the system needed to do. And that team was comprised of about ten people with interactions as needed with other folks within the Government Printing Office and outside.

As we moved into the next phase, what we call the Requirements Phase, that circle grew to almost 80 people. And it wasn't 80 people full-time, but the lives that we were touching on an almost daily basis, grew from 10 to about 80, where there were much more people involved within GPO and development of requirements. So now what was a small focus group has grown to a much larger group, where many, many people at GPO are working on this system and helping us understand what the needs are.

This is a slide that I showed at the introduction back in October. It really is the basis of what this system needs to do. It needs to be a world-class system for managing the information. We view it as one that needs to be rules-based, policy-neutral, and very modular-adaptable and flexible. As Bruce indicated, we need to be developing the solution for the future, and we don't know exactly what the future holds. We have expectations. We know that it's going to be much more information, much more content involved in what it is we're going to have to manage, but we don't have all the answers. So if we designed a solution that was perfect for today, in another couple of years it will be obsolete. We need to make sure that the system that we develop for the Government Printing Office will not be obsolete in the time frame that we're developing it. So it needs to be flexible, extensible, and modular.

So from the last review in October, we introduced the Concept of Operations, and that Concept of Operations has been posted up on our Web site since the meeting back in October. It's a comprehensive document of 100-plus pages that details the basic functionality of the system. And then there's also the presentation from last October that's up on our Web site.

Also in October I briefly mentioned the methodology that we're working through, and that's one of phases and gates. And I can now reflect back on where we are and where we've been and where we're going relative to the phases and gates. We're implementing a phases and gates approach to keep us on track. Many times, in very complex systems or even in very simple systems, there's a tendency to select a solution before you've really defined that the needs are, and when that happens, you typically have a problem. Many times you can guess right. But if you don't do a good job with defining what it is you need and what those systems need to do, it makes it very difficult to pick a solution. So if you pick the solution and then define the needs, typically you find that you have a less than optimum system. So a phases and gates approach really keeps us on track of making sure that we define the concept, define the requirements, develop a plan, design the system, and demonstrate that it works and meets those needs.

So this chart now shows basically what the six primary phases are that we are working through. The first phase is the vision, and that was something that Bruce developed early on with the senior team at the GPO when he first came to the Government Printing Office. What is it about this system that really needs to be done? It was really a vision document. The second phase is one of developing a high-level concept, or what we call the Concept of Operations, and that's what we reviewed back in October.

The third phase is Preliminary Requirements. Preliminary Requirements are those that get to that next level of specificity: Just what is it that this system needs to do so that we can start to go through concept selection and implementation planning to deliver that functionality in a system.

Phase 4 is that implementation planning activity, where a detailed plan of how we would roll out a system with evolutionary phases of functionality. That's where that is developed.

And Phase 5 is actual design implementation and beta testing to make sure that the system meets the requirements that are developed.

And then, finally, Phase 6 is roll-out, so that the capability is turned on in a very robust fashion.

Now, beyond this, as we get further down the road, we will actually talk about a few more phases within the system, and those are phases that are typically in the sustainment roll. Once you have a system in place, how do you maintain that system so that it stays functional and continues to meet the needs? And in a digital system as complex as this, or as digital systems are today, you have to continuously look at what the market requirements are to best meet the needs of the market that you're trying to serve. And that sustainment phase is very critical to holdback and continue to learn about what the next phases have to be, so you can again go through the delivery of those functionalities rather than being caught without a solution when the need is in place.

We were in the Requirements Phase, and what I'd like to do is help you understand just what a requirement is. Also, I mentioned in October what we're using is a very disciplined process developed by the IEEE, which has been developed specifically for developing very complex software and information systems. The definitions that I talk about here come out of the IEEE definition for requirements. A "requirement" is a structured collection of information that embodies the requirements of the complex system. The requirement serves to reflect back on what the customers need. So, in this case, our customers of agencies and Congress, what their needs are, as well as the information dissemination community, what their needs and expectations are. A requirement needs to reflect back on that customer's need. But it also serves -- and this is very critical -- it also serves to communicate to the development community. So this document that we've been working on of developing our requirements is a very pivotal document. It reflects back what the needs are and to the customers and end-users, and it reflects forward to the development community that will ultimately create the capability that it put in place.

The preliminary requirements have been developed under our Phase 3, this circle of nearly 80 employees now of GPO that have been participating in a cross-functional way in developing these requirements. These requirements are going to serve to benchmark the system. And what that means is that a requirement needs be one where there's something measurable about it. A requirement, since it reflects back to the customer and user needs, and reflects forward to the development community, needs to be tested. So once you have developed the functionality to deliver a capability, it needs to be a test. So the benchmark is really important. These requirements will help us serve to test to make sure we're doing what it is we intend to do.

And the requirements are typically updated. This phase is specifically called a Preliminary Requirement, because it reflects very heavily on what's needed. And in many cases we know -- as Bruce indicated -- we don't have all the answers. So we need to be flexible even in our design methodology for this system to be able to react to changes in needs, changes in technology. So as we move through the remaining phases of this initial deployment, there will likely be changes to the requirements that need to be incorporated. So, again, we have to be flexible in understanding how to develop the system to meet the needs at the time that it's deployed.

So where are we? Through the efforts in developing the requirements, we've identified over a thousand specific requirements for the system. And they're now line-itemed out based on a structure. In the information you'll be able to pick up at the break, you'll see how it's structured. It's structured based off of functionality that we've developed for the system based on a functional reference model, and each of those functions have specific requirements at a line-item level, and there's over a thousand of them.

The final documentation going into an IEEE format is being developed now. A list of requirements is a great starting point, but getting the rest of the documentation to support those requirements is a task that takes a couple of weeks to get in place. We're in the process of finishing that right now.

So if you look back to our phases and gates chart, where we are is just right at the end of Phase 3, so that we will be at a point, shortly, to publish our requirements document with the context of what the requirements are, why they were developed as they were, what is a good requirement and the purpose of that, and then about a thousand or 1,100 specific line items that tells specifically what the expectations of functionality of the system will be.

This is a reference model that I showed in October. And a reference model is particularly, for engineers like me, a simple way of looking at a very complex system. You need to continue to bring it to a point where you can understand it and then deep-dive into areas to get further detail. So our basic functional reference model back in October consisted of content ingest activity to the left, where we talk about converted content, so the scanned or digitized tangibles that are in the population today, harvested content, and we introduced a term called the positive content. So more in digital-going-forward information that will come to GPO.

The center section there is the Content Management piece, which is the complexity of this system, the version control, preservation authentication and access. And then on the right is the delivery piece: Hard copy, electronic presentation, et cetera. Bruce mentioned in his comments earlier that, early on in this activity, we really develop the need to be able to focus on the content and make sure that we will be able to serve out digital delivery in whatever form required. And it's really embodied in this simple functional reference model.

The model has changed slightly. It now has four elements. And actually those four elements were in the first reference model, but we, through our development of the requirements, realized that that piece along the bottom of Systems Administration and Infrastructure is critical and really deserves its own box. So the top elements are very similar: Submission, content processing, and dissemination. We're using words that are more common in the industry. The system administration and infrastructure level really point to the activities associated with managing a very complex digital system, as well as putting focus or shining the light on the infrastructure needs that we're going to have to have in place to support this.

And then the elements associated with each of those. And actually these sub-elements that are coming along in each of these major boxes actually start to form the Table of Contents or the structured form of our requirements. So in the material you will get at the end of the -- at the break here, you'll see essentially the Table of Contents for our requirements document that will highlight each of these areas that are on this slide. And there is probably about 10 to 20 detailed requirements under each one of these items.

Content processing is where, you know, access, authentication, version control, et cetera, takes place. Then dissemination again is the hard copy, electronic presentation, et cetera.

And then Systems Administration is where we talk about our storage needs. We talk about work flow. And work flow in a digital system is really the glue that holds a lot of things together. It's the process for describing how a job or a process of work would be managed throughout the system, all the way from the submission of information, the processing of information, and eventually the access and retrieval and delivery of that content or information. Work flow is the element that pulls it all together. And we also have sections devoted to security. There's a privacy section in there as well.

So as we now start to look at Phase 4, and we're in the Phase 4 planning stage right now, it becomes a very, very critical phase. Just like the requirements document is what I view as a pivotal document, because it reflects back on the needs and reflects forward on how to develop it, or at least to the developers to figure out how to develop it. Phase 4 is where we do the detailed planing of, how long is it going to take to do these things? How are we going to orchestrate the delivery of this functionality in a complex system at the same time that we continue to maintain operations at GPO? Reflect back on the comment about infrastructure. We have infrastructure today at GPO that needs to continue to produce work at GPO and maintain processes at GPO. As we build the new system, those processes need to be supported as the new system comes in. It's like replumbing your house without moving out. You're pulling out the old plumbing and putting in new plumbing, and typically you still need your plumbing. Although I've lived in houses -- well, that's another story. But Congress expects us to keep the plumbing live and functioning as well as the users of the information at GPO. So the plumbing has to stay functioning and working as we bring in the new plumbing to be able to maintain the system. So extremely close collaboration between this implementation planning phase and the Information Technology Organization with the CIO at the Governmentmain office: We talk daily.

The key deliverables of Phase 4, I'll just kind of go through these. And each of these are very complex tasks that we need to start to work on now -- or, actually, have already started working on. The first is the detailed implementation plan. Imagine 1,100 requirements, each of which having some sort of development and implementation plan of its own. Put all of those together and talk about the interdependences of those functions to be able to get delivered, and remember that we can't disrupt operations at GPO. It's not a trivial task. It will take us a couple of days to get this one figured out.

Design Specifications. We went through the requirements line by line and then developed a checklist of which of those require a detailed specification. And a detailed specification typically is another document that supports our requirement to allow a practitioner in the industry to be able to deliver the specific functionality directly to the spec. So there's specifications that will have to be written for those requirements in many cases as well.

Concept Selection. This is another one that gets very, very interesting. When you have a specification for what you want and you have it well understood and an understanding of how you can now get this delivered, typically there's more than one way to deliver that. So a concept selection process is where you identify all the possible ways of doing it,

develop the attributes that you will use to evaluate that concept, and then go through the process of selecting how you're going to actually deliver that functionality. And, again, as Bruce said, we don't have all the answers, and we certainly have not selected all the concepts that we're going to use. In many cases there are multiple concepts to choose from, which is the good news. In some cases there are concepts that still have to be developed so that we can actually work to select those. But this process of specification and then concept selection is one to help us work to make the best choices possible.

Updated Project Plan. You know, every phase and every gate, there's an update. So where are we? Where are we relative to where we need to be? What are the detailed plans? And an updated project plan is really an update of this type of level of where we expect different phases to start to occur.

Project Cost is another one. We monitor that and try to understand and estimate what we think it's going to cost for us to develop aspects of this system.

And then Design Validation Testing, D.V.T. Another acronym for everyone. We've got to have those three-letter acronyms. But D.V.T. is a system design activity, or even a product design activity is a test plan, that allows you to evaluate the requirements and see if you've met them. Remember back to the discussion of, what is a good requirement? A good requirement will actually specify what it is you want to be able to deliver. The D.V.T., or Design Validation Test, is the test to prove that you, indeed, delivered that. So key deliverable out of the Phase 5 are the D.V.T. results. A deliverable out of Phase 4 is, how do you really plan to do that test? What that does is force you to focus on what that specification and what the requirement is, because if you can't write a test plan, you probably don't have it specified right. So it's a very critical phase.

And then another thing that we do on every phase and at every project level within GPO on this system is, we constantly monitor our risks and mitigation plan. Every system needs to have a list of risks. If it was risk-free, it wouldn't be terribly interesting. But we all have risks, and those risks could either be: Can we get this done in time? Will it meet the functionality? Do we have the resources to do it? There's multiple candidates for risk. But risks are managed on a list with mitigation plans, which always gives you option B, and those are key ways to keep us focused and driving to close those issues so that we can stay on track. So risk management is a key part of the entire program.

Phase 5 and Phase 6, real quickly. The bullets here describe the key deliverables that come out of Phase 5 and Phase 6. I covered some of those as we were going through them before. Phase 5 is really where you design and then validate the design works. Phase 6 is where you do a beta test and demonstrate that you can robustly put that functionality in the system and deliver that so that it can actually work as the system needs to work.

So in summary, hopefully I gave you a snapshot of where we are, where we've been in the past six months in developing the requirements. Again, our system needs to be a robust, world-class information content management system. We are now in the process

of transitioning into Phase 4, Implementation Planning. What you will be able to see soon is the published document of those detailed line-by-line requirements, but what we have for you to today is a rundown of this presentation of where we are as well as the high-level Table of Contents associated with what the elements and requirements are when you see the entire document.

Thank you.