

The Quest for Persistence: An Overview of the Challenges Associated with Ensuring Digital Content Remains Accessible – Transcript of audio

Hello, everybody. We will get started with our next program, the quest for persistence in five minutes.

Welcome back to our next session, the quest for persistence. Our first speaker is Laura Sare. I will hand the reins over to you.

Thank you mama Kelly.

Since 1998, the U.S. government publishing office has used persistent uniform resource locators otherwise known as PURLs to provide federal depository libraries and other parties to stable URL access to online federal information. If the user clicks on a PURLs, the request will be routed. They do not need to update the PURLs in the padlocks because it GPO will modify probably entries if the information changes. And the server will route traffic to the appropriate website. More than 20 years later, changes in library collection policies, advances in technology, and an increase in the amount of digital and digital only information, along with some depositories becoming mostly or all digital depositories, lead counsel to create a working group to investigate the durability of PURLs and alternatives and to present findings and regulations to counsel for consideration.

Here are a working group members. Renee Bozeman, Laura Sare -- Allen Moye , Willow Spring fellow, Alicia Acuna's, James Jacobs, Sherry Laster, Robbie Sentelle, Alec Bradley, Ashley Dahlen and Cynthia Atkin as the GPO designated representative.

So far a working group has conducted focus group sessions to see what the community thinks about PURLs . Learning about problems and getting ideas for future enhancements. We also conducted a review of the GPO workflow to create and maintain PURLs that allowed us to learn what PURLs I can and cannot do . Members of the group have been presenting findings at DLC conferences. One being -- we are currently drafting our persistent identifier principles document that Allen is going to go into more detail about later. Finally, we are also working on the final report to counsel. Now I will turn it over to will.

Thank you, Laura, for the great introduction to this working group that has been ongoing for two years. Before we get into the principles and some of the findings and the recommendations, I want to point out that those are going to be preliminary. We are in the process of working this through. But before we get to any of that, there are a couple of concepts that you need to understand it will help put this into perspective. That is the persistent identifiers versus persistent access. When we think about these, these are the two different necessary elements for long-term access to digital documents or digital objects. Before I go further, I need to stop for a second and defined, what we mean by long term? Do we mean, oh, I don't know, 10 years or 20 years? Do you mean until the end of human existence? It would mean to the end of the Republic? None of those are very helpful when we are thinking about long-term. After we reviewed the literature and have gone through our research and related to identifiers, most of the other experts around the country and really the world for that matter, utilize and find long-term as meaning the current life of the technology and then the next iteration. A current example if we have the parole system that we have right now, long-term would be the current PURL system and then PURL 2.0. Now, when you get to PURL 2.0 or the next iteration of your technology, your back to current technology and then the next one. You always want to be forward thinking and forward-looking when

you are working with long-term access to digital objects. The reason being if you, let's say for instance you have a depository this utilizing persistent identifiers and then you upgrade. If you have not done your work for the next system, you could have a lapse and access, just based upon computer and software compatibility. That's something that many of us have expressed in our personal lives utilizing our own technology for personal computers and network. That is something to consider. When we say long-term, we mean the current technology and the next. Remember, that is not the end. It is always going to be the current technology and the next. Let's break down the two elements. The first is dealing with persistent identifiers. We are going to use PURLs. The pearl is the persistent identifier. What is likely is a persistent identifier? They do to really important things. The first is to it identifies or labels a single object. We do note that a digital object, you could use up persistent identifier as well, but we'll talk about digital publications. First, it identifies a single object, this could be a report, paper, any publication that is a single publication. Now, what this does is not only does it identify it, disambiguate it from other digital objects. What we mean by that is not only are we saying it uniquely identifies the title, it would even uniquely identify the different version of the title. If you have version 1 and we have version 2, you would want to disambiguate so the user is going to look and see how that item, that document, the digital one, they are seeking out the varied versions the next part of the PID that is important is that it is actionable. What we mean by actionable? Either you take the persistent identifier itself, and sometimes it has -- you can click on them if they are Artie linked, or you could take the full identifier inputted into a web browser and, lo and behold, it takes you to the document that you are seeking. Now, the question is how do we get there? How does it do that? This will not be a session that is going to go in depth into how PURLs and other PIDs work. You want to point out that in 2018, there was an excellent presentation given on the intricacy of PURLs and linking to digital content. I am putting a link to the slide deck in the chat to give you more information about that. But the really simple part, and the notes version, is that you have your PURL. I'm using that interchangeably with PID. You have initially identified your object. When you click on the PID address, it doesn't take you to the address of the PID, it takes you to a server, and in the case of the pearl example, it takes you to the GPO prole server. What that does is utilizing metadata inside the PID itself, it tells where to route the request to. In some cases, if you're clicking on the pearl link it takes you to the GPO server

Or it may take you to another agency server. What is a really cool about this is that in terms of the persistence of the link itself, it means that, and as Laura mentioned in the introduction, that let's say the digital object gets moved to a different server or a different location. You don't need to go through and change the PID itself. You just have to change the underlying metadata for what the link redirects to pick up things anytime there is a change in location for these materials, it means that you don't have to go through and update your catalog records. That is done at the PID level. What does that mean? PIDs have underlying metadata. That is not scripted for the object, it is metadata specific to the PID. You can almost think of this in some ways as its own separate object that is a link to an item that is separate than the item it is directly linking to. These must be maintained for the PID to continue working. Let's say something move from an agency worksite to the GPO server for whatever reason. In that case, GPO would update the underlying link. That way there is continued access. That is through the maintenance of the actual identifiers themselves. That is the first part. The persistent identifier is what this working group was tasked with working with. However, there is a second point. That is persistent access. This is the other necessary step. We don't have both of these, you will lose persistent access. What we mean by persistent access, that refers to the accessibility of the actual object that is being identified and directed to by a PID. This will be the actual digital form. If you receive a catalog record with a PURL link or any other PID in their, you're not actually getting the link, the documents are from your getting the link that takes you to it on the server. The excess part remains the actual document itself that is on a server. Now, you may wonder, isn't everything online and easy to get there? No, it is not. And the

reason being, not all of the government information is linked to a GPO server. Maybe on an agency website. As we know, every fourth two eight years, there are changes that come through. Sometimes things get changed from depositories. Things may even get moved around on the servers themselves. Here is the really important part. The object itself is removed off the service, the persistent identifiers will do nothing because there is nowhere for them to go to. Now, theoretically, for persistent access, you do not have to have a persistent identifier. However, if you have just the regular URL or uniform resource locator, foreign object LSA it moves to a different location that is not linked to -- it is still officially assessable, but it is like a book and a library that is not catalog or that isn't shelved. In those cases, yes, you technically have the document, it is not practical in the suit that you could actually find it.

I want you to get this in the back of your mind is as we go through the upcoming principles about PIDs and also about the preliminary findings the recommendations. If you keep these two concepts in the back of your mind, this will really help tie a lot of this together and to make a little more sense in the grand scheme.

Speaking of principles, I think now would be a really great time for us to talk about what the working group has worked on. I'm going to turn it over to Allen Moye, who is going to talk about the principles.

Thanks, Will.

I think you can all see me now. Let me just move on to the next decide. As well said, we are going to discuss principles. I came into this conversation a little bit late. I am still a newcomer to the working group. But I was fascinated by a lot of the conversations in the work that had Artie been done. When I joined, the group was trying to decide how they were going to make recommendations around certain standards are certain principles to GPO to move forward. We started thinking about and discussing the principles, for me, because I work in a law school, I started thinking about, well, okay, you have a constitution which is based upon a certain principles. I started thinking about that as the structure. You've got seven principles of the U.S. Constitution, popular sovereignty, republicanism, federalism, separation of powers, checks and balances, limited government, individual rights. Some of these are actual embedded into the Constitution in the actual language. Some have been extended in terms of how the application of these particular principles have been applied. Basically her ticket about a conference of a fundamental law or doctrine or something, role or belief that guide the person section, or a rule of or code. Going to think about it, and this is one of the things, I teach a class and introduction to American law. I tell the students that all laws revolve around some principal. As an example, I say that society has an interest in and protecting their children from harm. But the legislature will do as create a law that allows the state to step in and remove a child from a harmful situation. Included in that, in terms of trying to help with that particular principle, there has to be a definition of what a child, a minor, it may vary in different age in different states are just actions. What is considered harmful to a child. Again, in furtherance of this principle, you come up with the rules or standards. In the context of what we are talking about is, as it will pointed out, you have PURLs, or PIDs. We came up with five broad principles that we wanted to make sure would be included in our recommendations to GPO. First, you have to have stability, which basically means that it has to take you to the resource each and every time. There has to be validity, that means the resource it takes you to is the one you expect to find. Transparency, relatedly, you know what to expect when the link is resolved. And then the last two are extensibility and interoperability. Extensibility music can be used for lots of different kinds of content and a lot of content. And then interoperability means it needs to links need to work regardless of where they are accessed from.

In terms of putting this into practice so to speak or coming up with the features that we thought would be important. I should clarify, we focused on the PIDs themselves as one aspect of the next expect would be for the system. The same principles that may be applied in different ways or with different things or features in mind depending on where you were referring to the PID itself or the system it is working on. First and foremost, PIDs must be unique and provide direct long-term access to a specific digital document or object that is doubly assessable. Each ice provides direct access point this out 121 correlation between the PID and the object identified. That is the open accessibility.

Next, unchanging. The PID for the content must remain unchanged as long as the resource is publicly accessible. It must never be reused for different document or object, because that could lead to confusion. Next, and this might be a little bit different. If you downloaded the slice before this morning, because this is still a somewhat dynamic people made little bit of change in the third one. It must enable access to additional resource under the control of a trusted entity or an established partner. By that, we mean that a core component of permanence and reliable performance is control of the digital content. The preferences that they should employee PIDs for objects under its control or under the control of an official partner or trusted entity with a sound agreement required the transfer of the content if the official partner or trusted entity is unable to maintain it in its current system.

Last is a specific object, which specifically means that it should always -- indicated in the descriptive metadata that is validated or approved by GPO artificial partner. Resources it should be disability weighted within the system so that they are distinct and distinguishable from other resources. It must be reusable for different types of digital content and sufficient for large amounts of continually created content, such as agency websites.

Moving to the next level, we are talking about systems and how those principles would be applied to systems. We came up with three pictures that we think are important. The first is the system must be part of a system that is stable, secure, and interoperable with other systems. What we mean is the systems must connect and exchange information with other GPO and digital library systems without workarounds and other tools to be able to make use of the systems output. They must be able to be migrated for future system updates. Was a lot of discussion about that in terms of how quickly things change, and you don't necessarily want to get stuck and not be able to make it available as information changes.

Next is the access. It should work regardless of the users access a starting point and the existence from our delivery system used. They should resolve it through the PID system should work reliably from any point of origin allowing local systems to pass the traffic and additional controls such as a proxy server as a needed. Lastly, they must have publicly accessible metadata. This means that they must have metadata that is separate from the object metadata. This is something that will mentioned earlier. The PID metadata should be retrievable and made interoperable with global systems.

And with that, I'm going to turn it back over to well, I believe. And we will finish out.

All right. Thank you. Thank you for the great summation of the principles. Let's talk about our preliminary findings of the working group. Once again, I want to stress that these are preliminary. The working group is still meeting at this point weekly to wrap these up.

In terms of the first findings, the working group cannot recommend a specific PID schema our system. However, the workgroup offers recommended principles for PIDs and systems. The reason why this is

one of the findings that we have come across is when you are looking at PID systems, there are a lot of similarities amongst them. When you start looking down at the differences at a technical level, you start getting into things that no one on the group felt technically we were proficient enough to say that this is something that we can sign off on and this is the ultimate system to go with. The other thing about, as we have gone through researching PIDs and PID systems is that there is a lot of similarity and how they operate. And really, if you're looking at, okay, we identified a document or a digital object, and the systems all have the same goal, long-term access to a disambiguated object. Of course of that, we felt that it would be more useful for us to have the principles. I would also give, because GPO has the on things and that they have to worry about, things like security and procurement and things that are not the considerations that I still have at a depository library. With this, we felt it would also give more flexibility of this is what the big goals are the will to go with. Let's see if this can be achieved and worked out with the flexibility of a system that GPO needs as well.

The next part of our findings is the persistent identifiers and persistent access. They are both different yet necessary for the long-term access. As I will point out, once again, this working group focused on persistent identifiers and not persistent access, although they are somewhat linked. The charged that we had was working specifically with the identifiers. The persistent access is still an element that is a necessary. It is something that is entirely separate from the identifier itself that still needs to be managed and mitigated in some way or form.

This brings us to the next major issue. The major issue we are dealing with the persistent access our digital objects outside the control of GPO. As I mentioned earlier, when you are linking to online information, information, federal information, it doesn't necessarily go to GPO servers. I am personally of the opinion, and I'm sure some may disagree, I'm of the opinion that one of the safest and most able places for federal information is then GPO to control, especially considering that they also have the parole system as well. Keeps it within their Will House. It's a lot easier to control things on your server. One thing that I really want to point out is that the federal government is enormous. That is underestimated. There 2.8 federal 2.8 million federal employees and that does not include contractors of the military. A significant amount of information that is published and some published by various agencies that GPO, just based upon the massive amount, may not be aware of. Or if they are aware of it, it is better for another agency to post that material on their own servers so it doesn't duplicate the effort and the use of taxpayer money.

The downside of digital object being outside the control is that there is a much, much greater risk of losing persistent access and specific cases, especially in cases where there are not signed agreements.

Excuse me, will. We are getting some major ringing feedback from your mic. It just started.

What you disconnect your audio and reconnect and see if that takes care of it.

Is that any better?

Much.

My apologies. I guess I need a more persistent microphone. Something went wrong there. My apologies, everyone. I am sorry about that.

And is so as we are looking at the materials that are outside -- for instance, if you would like a modern-day example, some of you may have seen the EPA had a suppository that they took off line. Once that goes off-line, there lies the issue that there's not a backup copy somewhere else, that means that that access, the persistent access could be lost. This is a separate issue from the identifiers. It is something just to bear in mind. If something is out, in most cases, it is probably not identified, it could be where the documents, the files themselves are loaded. Another thing that we found is that while PIDs are great for single documents, if you have version 1 of the report put out, their phenomenal for finding version 1. If you do identifier and 20 years down the line if you still have persistent access and a persistent identifier, you can click out of the fire and 20 years down the line, you can find that specific digital publication, that specific report. However, as many of you all know, not all forms of government information our monograph. There are cases, especially when talking about serial types, continue waiting resources. A case where a parole or a PID take someone to an agency website or a depository life that has -- that goes against one of the principles that Allen mentioned before where you want to have one persistent identifier to one document. The one-to-one relationship. There are certain cases where it may not necessarily be the best or most effective way to provide the persistent identification of the axis. There will be exceptions made for certain types of materials. Another big one is that PIDs have underlying metadata for the PID. Is something that maybe is hard to cover him. You've heard me mention it before and will probably hear me mention it several times about today and tomorrow. The underlying metadata is related to the PID itself. That will be that URL it is linking to, maybe some technical information. That is separate then the descriptive metadata that the PID is labeling and sending to. A lot of that metadata is usually not visible. Most cases when we are looking at what are libraries looking for, even with PURLs, one of the things from a preliminary stand point, we can reasonably say that most are looking for, okay, if I have a PID that is identify and not to, I can click on that PID, and it will take me to that object that it is describing. All of that stuff in between, well, the user doesn't really care about that part as long as they are able to access that document or object they are looking for. Now that we have spoken a bit about the preliminary findings. As I said, very preliminary, and I suspect there may be some changes coming before the filing of the report. Let's take a look at the preliminary recommendations. Once again, this is the first crack that the working group to get this. These are also, I think, although we have had a few changes, from the big picture, we are still pretty consistent with what we have started with. Although, we are organizing things a little differently. At will go through, and this will paint a picture and kind of tie together a few of the things that we have spoken about and work towards.

The first recommendation is the depository library counsel should accept the recommended principles for persistent identifiers and persistent identifier systems and transmit those to the government publishing office and the director. This becomes a little more Suffolk Minotaur, but that is also as I mentioned part of which that is one of the conclusions that we came to rather than recommending a specific PID system, we found the things that we wanted the system to do to effectively make sure that this information is assessable in the long-term.

As part of enacting the principles for persistent identifiers and systems, there are several things that need to happen. The first is maintaining a stable systems for identifiers. It can also be utilized within the CGP and other systems. What that means is that the PID system itself and is to be stable. It is to continue to work. What that means is that it needs to be maintained so that the first element of our two elements for long-term digital access needs to make sure that that is continuously updated and is stable so that the broken link is a not the link itself. That is under the GPO control. The other part of this and is also the interoperability. What this means is that it will not only work with the CGP, but whatever I'll else or online catalog or whoever has that PID, regardless of their web browser or whatever system they're using, they are still able to get access.

The second part of this, and you can start to figure out how we may be looking to rearrange some of this is to increase the number of content managers. There are several ways to do this. The first of which is probably, I'm of the opinion, would be to ingest into government folk. The only one in the world. A very stable and safe place for long-term, really for the long-term access. But there are also areas. Web archiving, and formal and informal interagency agreements. One of the things to remember is, a lot of the information that is being linked to is in the executive branch. GPO is in the legislative branch. They can go in until the legislative branch what to do. That doesn't mean that there should not be cooperation with one of the great things we do see in the federal government is a lot of cooperation. These a way to help increase the persistent side of the documents themselves. Now, I will note that this kind of pushes away from the actual identifier. But as you noted, it is critical to identifier versus access. Also analyzing persistence of existing content -- analyzing the persistence of the content that is already there. Is the persistent system working? From my experience, I've had a lot of great success with PURLs. There are times that it doesn't work every now and then. And those usually get rectified pretty dang it quickly. But it is good to also analyzing specifically the persistence of the content that we are already aware of, whether it is something linked to an agency website, whether it is and and and GPO. Is the system itself working. Develop strategies to increase the management of these. Remember, there are non-persistent identifiers. We had cereal submission before. Something that needs to be included in the long-term persistent access. Additionally, one thing that I wanted to point out and it really kind of goes back to the second point of this, unrecorded documents. There are things that GPO is not aware of that are within the scope , and they should be catalog at the very minimum and indexed my GPO. Once again, the federal government is very large. It is hard to find all those little pieces.

So adding more URLs to the collection. What this does is more web content. As we see, lots and lots of web content, more and more digital publications or matrices. This is a great way to ensure that persistent access to this content. Once again, it is increasing that as part of the work.

The next part is exploiting the technical solutions that allow for the metadata for the PID systems to be exposed and how can that be incorporated along with the metadata. PURLs themselves have metadata. There is currently that information out there. It exists because the PURL needs that metadata to know where to send the link to , where to redirect it. One of the things that this group is looking at is just finding ways that that metadata could be more readily available. The reason being is that it allows for tracking of materials that may have moved. If there's something on an agency website and the agency changed the website, or limited to a different place, let's say there's a broken leg, this is the type of information that could help other systems that they are trying to track down some of these documents and items that are moved around. Incorporating some of this metadata and making it easily accessible some of the be a graphical metadata. That would be part of the technical solution. Additionally, seeking to work with executive agencies to make sure that more their information is collected and preserved and described. This goes back to the natural -- a national collection. Separation of powers. Working with other agencies to see what can be done to help make sure more of the stuff is preserved. Once again, we are getting to the area of the persistent access.

Okay. Out of those categories, the GPO should export the broader implications on PIDs digital collection development systems and workflow including digital deposit and unreported imitation. While we are working and focusing on PURLs and PIDs, all of that and is in the collection. You have to -- when we think of the digital national collection, that is the big umbrella that is all of the things that are linked to that also includes things like digital deposit, areas we have libraries that are hosting actual digital files. Part of the unreported documents. That is also related to PIDs. First as many of you that have unreported

documents into GPO one of the things that many happens is that the document is catalog and PURL is created. In doing so, that is part of the bigger framework. That is not exactly PIDs related, it is still within the larger framework. Understanding the broader implications and how can they be really utilized and how, within this larger system. One thing I want to note about PIDs, is a lot of research done by this working group found that they are utilized a lot in academic function. Because of their certain unique areas that are needed, especially for identifying authors, for instance, and co-authors, you can actually identify a paragraph if you need to. As a whole, they are not a new concept that they've been utilized for a long while within the academic publishing area framework. And so just understanding more how this affects government information. It there are unique needs of such. Finally, the last one is, as much as possible within the federal technology environment, GPO should seek to strengthen interagency technical cooperation. This is not the collaboration that I was talking about before where you are working with formal and informal agreements with other agencies to provide content to GPO in for GPO to proctor servers. What this has to do with, as I mentioned, the federal government is very large. GPO is not really what that uses technologies but there's a whole host of them, if not all of them are leveraging technologies in certain ways. Some of them are actually using PID. Figure out which agencies are utilizing some of these PIDs and if another agency is successful and utilizing that, what can be learned about that. How can that be utilized in the terms of a bigger federal technology ecosystem. Once again, always an opportunity for more cooperative programs. Finally, it is also going to help her because one of the things is that in terms of technical record torments, finding ways to help have best practices that can be shared because the more agencies and stakeholders that are using compatible systems. Remember, we're not talking about the current system. Were talking about the current system and the next system. We are still thinking into the future.

I'm going to go ahead and wrap up. This is what I have for our preliminary findings and preliminary regulations. As I mentioned, they are still in the process of changing. I look forward to when they are transmitted and hopefully available for others to see. At this time, I believe we have a few minutes left. More than happy to take some questions.

Okay. I will start with some of the comments that came in. Of your introduction, Elizabeth said this is super humble. I'm beginning to understand why our library may not be able to get certain PURLs it to work now.

Bradley asked of the other attendees, do any FDL libraries utilize permit.cc. Scott Matheson said we do, but not for the docks. Darga said he's liking these principles. Good work. James said, control of content is critical to providing persistence. Dan says he likes the idea of adding URLs to the archived collections. Jenny points out that we need to keep access to superseded info too. It is hard when PURLs goes to content that is constantly updated. We need the public facing content for general public and the previous content with the clear date of publication. Others agreed with that. James said, will sometimes request the URL be added to the archive collection when I submit and unreported docs form. When the GPO calendars usually get back to me pretty quickly that an unreported dock has been,, they have never said anything about the CD recommendation. I'm unsure how to request that a URL get into the FDL archive.

Scott said maybe a separate subform for seed recommendations. A second confirmation game set or maybe a radio button to mark the link for seed recommendation, rather than another form. Jim Jacob said, please consider these two criteria, either for principles offer proposed need needed functionality of the chosen PID service. Once chosen it should be able to identify by and point to one more more than

one copy and it should be chosen to point to a contain descriptive information about the digital object to which it point that is what we have so far, will pick

And I can go a little bit further. Part of that is a redundancy thing. And this is kind of an interesting question that you get into, where there's a copy one and a copy too. Those different objects. But if the information is exact same, from a practical purpose, kind of a one of the ideals you're looking at is concisely that if you've got something that is duplicated on another server and server one goes down and you have an exact copy on the idea that the server one, if it goes down, the PID doesn't go down, they could send it to the backup copy. That is something that has also been discussed.

Do we have any other questions or comments coming in?

A Jenny points out the need to point to authenticated copies and how essential that is.

Absolutely. Thank you for bringing that up. That is something else that has been discussed as well. Yet, it is important. That goes back to the principles of, I'm paraphrasing this, when you're going to a PID, it needs to be the authentic version of it, even something that is an edited version would not be the same thing. I recall, I remember there is a digital signature on authenticated GPO documents I recall, I think I've seen that.

I was just going to add. I think we addressed that with stability and validity as part of the principles. That it should take you to the one you expected to. But I do ask you want to comment. I like the functionality suggestion. Maybe incorporating that a little bit better and to the principles.

I want to respond to Jenny's remark. Said keeping a unique role number is too cumbersome. That is actually, and that is one of the things that we won on. The PURLs, once they are issued, once it is issued to a document or an object, that PURL or whatever the PID number or ideas, that should not change. The one that is going in your research, that part should be unchanged. Let's say for instance that it is a case where there is publicly identify all information and it has to be removed for privacy. In that case, you would not reuse that prole number or the PID number. The re-change any of that, if you repurpose it, that is not a good identifier at that point. It is the underlying metadata that has to have that maintenance. And that is what we currently see. That is why if there is anything that is updated on the backend, that is why you do not have to update your catalog records every time if there is a need to name name or something.

Since we were talking about authenticated versions, James mentioned in the chat that it would be really cool if authenticated versions could be at FDLP libraries. Let me scroll through and see what else I can find.

James, that would be very cool. That starts getting into the concept of a digital deposit to which we will hear more about tomorrow. Yes, I agree, that would be a really cool thing to have.

More discussion of transit is going to multiple versions described as load management. I am not seeing any other questions. I think we have got all of the questions. Anybody else want to put some more comments into the chat.

A do see there's a comment that came in from Jenny that says, I'm going to guess is from the Connecticut State Library, with respect to link to catalog records instead of directly object with PURLs. Reference staff don't have to update research guys point

Really, the goal is that if you're PID system is working right in the ideal scenario, even your calendar shouldn't have to make updates to the catalog records. That should all be done in the persistent and fire system. In this case, it would be on the prole system. That is really kind of the goal. That is interesting to see the younger directly to the desk the goal link to the catalog record instead of using the prole system.

Okay. It looks like I am not seeing any more questions or discussion in the chat. Is anyone saying anything in the questions are chat before we wrap up for today?

I'm not saying anything else.

Great. Thank you so much for coming to thank everyone for coming out and attending this presentation. We really hope that it helps shed light on one of the many issues that is in the government information world right now. One of the film things that is really be looked at. If you're looking for more, invite you to join us tomorrow for the joint presentation between the digital deposit working group in the prole working group, we are going to get more information about the digital framework and The Bigger Picture of things, including digital deposit. And also, one thing that I really wanted to point out is that during the open from tomorrow, please, if you get an opportunity, go to the FDLP site to look at the questions but the first part of that is going to be directly supporting the all-digital FDLP task force as well as counsel. Both would love to hear from you . Please, if you've got the time, take the opportunity to think about of those questions. We look forward to seeing you tomorrow at the open forum.

Thanks, Will. Thanks, everyone. We will see you tomorrow at noon Eastern time. If you go to the meeting site, if you just going on the Tuesday schedule, you will have all of the links that you need. Thank you. [Event Concluded]