

PODS Association provided a six-part training series in May and June 2020. Questions asked during these sessions were documented and are below with the answers provided by PODS technical staff and volunteers.

Is PODS Implementation available for graph databases?

No. For example, non-traditional databases (like mongodb) might be way better for storing ILI data than PODS currently is.

Are there examples of PODS models available(with virtual data)?

No, but development of sample data is underway by PODS Association.

Are features on the pipeline are tied to the lat/long on the pipe centerline itself?

It depends on the alignment sheet software. Most of them require a centerline at the minimum, of course it isn't very interesting without some features, but you don't need everything.

Can MAOP be greater than Design pressure?

This should be addressed by your internal pipeline engineers or risk engineers.

Is a complete uploadable pipebook is required to be uploaded to any PIMS software to generate such alignment sheets?

Need more context, but the behavior of a feature can be controlled via the Edit Response. There is a good summary in the Conceptual Model poster. But a feature does not actually require a GEOMETRY and can be created using measure/station.

Is PODS planning to provide a demonstration of a new pipeline being created from scratch in PODS 7?

PODS Advanced 7.01 Training will demonstrate this in a simplified way.

I do not understand how you could align the map with the band, when the geographic feature is very non-linear (for example in the area where the pipe makes a bend towards north?)

It depends on the software, but in a traditional alignment sheet you would have to zoom out or add more "breaks" to get smaller sheets if the pipe makes a sharp turn. With a specific example I could add more to how this works in general.

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What are the software or applications that can visualize PODS data?

Esri/ArcGIS with or without APR, as well as other tools that support GEOMETRY data types in a database. Other vendors may also offer software that can visualize PODS data.

What are the differences between PODS 7 and legacy versions?

PODS plans to develop a user-friendly comparison. The PODS Technical Committee on Governance (TCG) has an item on their list to build such a document. However, quite simply: PODS 7 is well documented, providing vast improvement in structure and definition.

Can this be published to portal?

Yes, but likely you will want to be using Esri's APR extension or some other process to build a "view" of the data that makes it more useful using the simple mapping tools in Portal.

Using a standard model helps you keep data well-organized. You will still have to transform it from PODS into what PHMSA requires. There are both software and consulting vendors that can help with this.

Does implementing PODS offer any benefits for gas transmission and hazardous liquid pipeline operator submissions to PHMSA's National Pipeline Mapping System (NPMS)? Anything new from PODS7?

Is there a populated example PODS DB available for members which shows examples for how data is stored and linked inside PODS with a linear referencing and spatial aspect?

This is not yet available.

Glad to see the Sheet Cutter for PODS 7. Do we have similar version update for Centerline Design Toolkit and Facility Manager to work with PODS7 and APR?

Vendor Specific Question (New Century).

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If we have special service like pipeline integrity software and not based on GIS (say based on simple mapping tools like google earth), still we need PODS?

PODS is not directly dependent on a GIS. It does use a GEOMETRY data type to store locations, but this is a standard part of all relational databases. PODS is a model that helps you to organize your data into a standard format. You may not need PODS, but PODS will help you by telling you what data to put where so that you don't have to think about how you are going

What are the differences between PODS, UPDM and GITA?

PODS is a Pipeline Open Data Standard developed by pipeline professionals. The Open Data Model enables vendors to write applications and develop tools for users. The data model is well documented, including guidelines for extending the model to meet operator needs. UPDM is a template from Esri; GITA is an organization not a data model.

Will this Location Referencing extension in Pro be replacing the Route Editing toolbar that was in ArcMap? Or will the route editing capabilities be migrated to Pro in future versions?

Not sure what you mean by Route Editing, but if you are referring to the previous version of APR in ArcMap, yes, it is being replaced by Pro. Esri is best positioned to answer this question.

How does PODS cope with inspections running in different directions? I.e. if an ILI runs from A to B, but later runs B to A, and the spool numbers tallies do not relate.

You would need to load that data carefully so that the data is reflected that way.

Are there tools which create a centerline from a table with xyzm?

You can do this in ArcGIS Pro using several tools in the toolbox or using python. There may be other vendors. You could also do this in FME, without ArcGIS.

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Is there a possibility to incorporate an approval process in APR or using other tool to approve user changes to centerline?

We don't think you can out of the box, but it might be possible to do with protected versions and some external process management.

This question is about ArcGIS Pro. Is LRS still a set of out-of-box tools in PRO like in ArcMap? Do we need to buy Network Analyst extension or APR extension?

In ArcGIS Pro there are still a set of OOB linear referencing tools. However, Esri has added a specific extension called "ArcGIS Pipeline Referencing" specific to editing pipeline linear referencing data.

How do "route" and "network" fit in this picture?

a route is a section of pipeline that has a continuous set of measures (no gaps or overlaps). A network is a set of routes with the same measurement system

Is the logic built-in into the PODS model, or is a PIMS system required for integrating the logic?

In general there is no logic in the data model, it is just a bucket to store the data.

Is an implementation, is the first step establishing the schema?

Yes, you might want to extend PODS to fit your needs, but you could also just run the script and use the out of the box version without changing the schema.

Would be great to see 1 pipeline being connected through these different tables with real data - would make it very clear- if possible, to do- understand would take time- maybe as a separate training- please advise?

We are working on some sample data.

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Where is the documentation on which GUIDS do we use to tie the tables together? For example, which GUID in the Valve table will tie it back to the Pipeline table? We have found PODS 7.0 very difficult to implement due to the lack of documentation and people with knowledge to assist.

The ID's are in the abstract classes and when the physical model is created from the logical one (the ea file), the fields are all merged into the final tables/feature classes and relationship classes created, etc.. If you plan on implementing the ESRI geodatabase with APR, the final Geodatabase has the relationships and fields all in there. The ESRI File GDB is part of the download for PODS 7. (image shown at the bottom of email) The Abstract classes are defined better documentation. , but basically, the pipeline feature table below has fields and those fields are in EVERY table that is a pipeline feature, such as a valve, flange, pipe segment, etc. per the relationship line/arrows in the diagram. So the PIPELINE ID is populated in the final valve table (which has all the fields within it) and those are joined to pipeline table's unique_id with relationship class in the physical model, aka ESRI file GDB.

How to integrate APR and Utility network to PODS Lite? Where I can find documentation about it?

PODS is working on this with Esri in a working group.

Where can we find how the GUIDs tie these tables together?

The easiest way is to start with the conceptual model. Once you kind of get the hang of it, the names are very consistent so it's easy to follow.

In PODS7 conceptual diagram, there are entity tables which are ending with CL. Are they Code list or Class? for example VALVE_FUNCTION_CL

They are Code Lists

What is difference between PODS Spatial data model and relational model?

There is no longer a difference, we only have one model, and they both use spatial data types.

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I thought PODS7 has been "published" for a few couple years.
What do you mean: it is upcoming?

PODS next round of updates are upcoming. PODS 7.0 HAS been released-- It is just starting to be used.

Is the imagery utilized for GIS analysis updated daily to ascertain any damage caused by a natural disaster, say a cyclone / flooding?

This depends on what type of imagery you are paying for. The standard Esri imagery is updated periodically but should not be considered live. There is also the LANDSAT data which is more current, you can also pay Digital Globe to task a satellite for you to get almost live imagery if needed.

How often would you run an ILI with PIG so that you would get more info to make sure what go collected is indeed more accurate?

You should probably ask your internal pipeline engineers or risk engineers.

Does PODS provide examples of actual queries (SQL) of the data model?

No, but you could get some examples from PODS service provider companies.

Can you connect with collector for ArcGIS or Survey 123?

Not directly, but you can use a staging database, several vendors in the community do this type of work.

If LRM is used, why events such as coating, valves, ...are implemented as spatial objects (e.g. feature classes)? Should those have been represented as event tables, and "dynamically segmented" in real time?

They can be, that's the power of PODS! The tables contain a GEOMETRY column, but you can use the edit response and ref mode to control exactly how a feature works. I believe that Esri's APR supports this idea (dynamically segmented in real time).

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