IVOA – P3T
Protocol Transition Tiger Team

Why are we doing this ?

IVOA P3T meeting
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Time is a cost for projects

It takes several (>5) days for a new developer to learn how to implement an IVOA service based on the text of the standard document alone.

Using a combination of machine readable specification and industry standard conventions we could cut that to less than a day.

Multiply 5 days by a team of 10 people, and the cost in developer time begins to represent a significant cost in terms of money.

That’s 50 days your team could be working on something else.

Per standard ...

We need to make it easy to understand.

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Time is a cost for developers

Developers are used to using high level IDE tools that auto generate a lot of the boiler plate code for them.

They can drop in a machine readable OpenAPI specification and get a working service within a few minutes.

If they need to read the details from a text document, and write their own web service code from the ground up, they not be keen to adopt our services.

Writing low level web service code is like writing assembler, some people need to know how to do it, but 90% of developers never need to.

These are the next generation of our customers.

We need to listen to what they want.

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Complexity is a barrier to adoption

Scientists don't want to read technical specifications.

Scientists pass the technical stuff over to their technical team.

If the technical team scan the documents and decide it looks complicated to implement, it will get put in the backlog.

If the technical team can see how quick and easy is would be to create a new service using their current tools, they will be much happier about giving it a go.

If the we want people to adopt our services, we need to make it easy.

Speaking for myself :

- Evaluating a new service - I want to be confident I could get something running within a couple of hours.
- Evaluating a new API - I want to be confident I could get my own code running within a day.
- If it fails those criteria, I'll leave it on the shelf and move on.
- I am not short of things to do.

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Security is an issue

Some of the IVOA standards do not conform to current industry standards for web service security.

Technically the actual security risk may be small, but that doesn't actually matter.

As far as IT services are concerned:

- If a service meets all of the current security standards, it is considered safe.
- If it doesn't meet all of the current security standards, **it is considered unsafe until proven otherwise**.

It is up to use to prove our services are safe :
1) by doing a lot of complicated security reviews of our standards and our code
or
2) by conforming to the current industry standards and tests

We need to make it easy for IT services to tick the box.

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What is in scope

The goal is to evaluate what is needed to bring our standards in line with current industry practice.

- Machine readable specifications
- Compatible with current development frameworks
- Compatible with current development toolsets and IDEs
- Compatible with current security standards

Proposed changes should meet at least one of these criteria.

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What is out of scope

- Solving other problems
- Introducing things from the backlog
- Fixing stuff because it is nicer

The primary goal is to come up with a set of recommended changes needed update our standards to match current best practice.

We can discuss adding other stuff in the main working groups

We want to avoid combining multiple changes into a complex discussion that lasts for several years.

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What is next

Still a lot of work to do ...

- P3T write up their recommendations
- The working groups discuss and adopt the changes
- New versions of the services implemented
- Testing and deployment

A couple of years is ambitious, a few years is realistic, several years would be disappointing.

- Retire happy and leave it up to the next generation to take it from there ...

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