Summary of day 1 from infrastructure provider's viewpoint

including the challenging bits

Good news

- Requests for features already covered
  - image services: 3 mentions
  - spectral services: 2 mentions
  - security: 2 (3?) mentions
  - catalogue services: ~4 mentions (IIRC)
- Nobody's saying “it's all broken”

Bad news

- (Bad if STFC won't pay for more development)
- Missing/inadequate things:
  - data models
  - Service types
  - IVOA standards
  - Metadata modes
  - Grid access
- Gap analysis follows

SKA

- Make sure IVOA data-cube protocol suits
  - Check data model
  - Check ability to serve large cubes
- Not challenging: huge rate of raw data
  - VO doesn't expect to see this
- Virtual analysis facility
  - Could be exposed on VO a la CEA?
  - Does this imply command of telescopes?
  - Scalability: grid requirement?

Solar data

- Data model – IVOA doesn't have one for solar
  - => data access protocols don't fit well
  - Do we want an IVOA solar data-model?
- Data access: expose or conceal facility detail?
  - Where do we put the unifying abstractions, in DAL services or in higher-level services?
- IDL access to tools: in hand, needs finishing

HerMES

- On-line tools not a problem
  - need to wrap the actual apps (small effort)
- Provenance, completeness information is tricky
  - VO providers tend not to register this information

Gravity waves

- May need new data model
  - or use (emerging) IVOA time-series model?
- Processing on-demand on grid
  - Mediated by VO?
  - Do GW processing on EGEE via EuroVO?

Time-sensitive data

- Speed, reliability issues
  - Need a parallelization layer above DAL?
- Centralization of reporting of events.
  - “just another catalogue”
  - but need a smooth way of adding events

UKIRT

- Need cube-serving SIAP (v1.5? v2?)
- Need DAL-toolkit upgrade to SIAP for cubes
- Possible auto-publishing via specialized VOSpace

JWST

- Archived at MAST
  - Probably not with UK software!
  - => any challenges are in the client s/w
  - Do we need some custom clients or portals?
  - Have test cases ready early – test MAST implementation while still flexible

ATC

- Line catalogues:
  - IVOA SL model
  - VAMDC?
- Restricted internal access: not a problem.
- Need reference sites for examples
- Want promised schedules for standards, implementations
- Planning problems with future standards

WFAU

- MyDB/relational VOSpace/etc
  - feasible; needs work
- Busted US registries (prob. SEP)
- Better cross-match
  - how to make it performant?
- Secure SIAP:
  - needs VOTC upgrade to ESAC DAL toolkit

Concerning data models

- There's *always* a data model
  - Every protocol has at least an implied data model
  - Interoperability = shared data model
- The model limits what you can do
  - Worst limits come from implied models
  - => need to make it complete as possible
  - => need facilities involved
- But: full, open models are expensive to make
  - Needs a dedicated body to look after the process