Thoughts on the NASA EOSDIS Common Metadata Repository API

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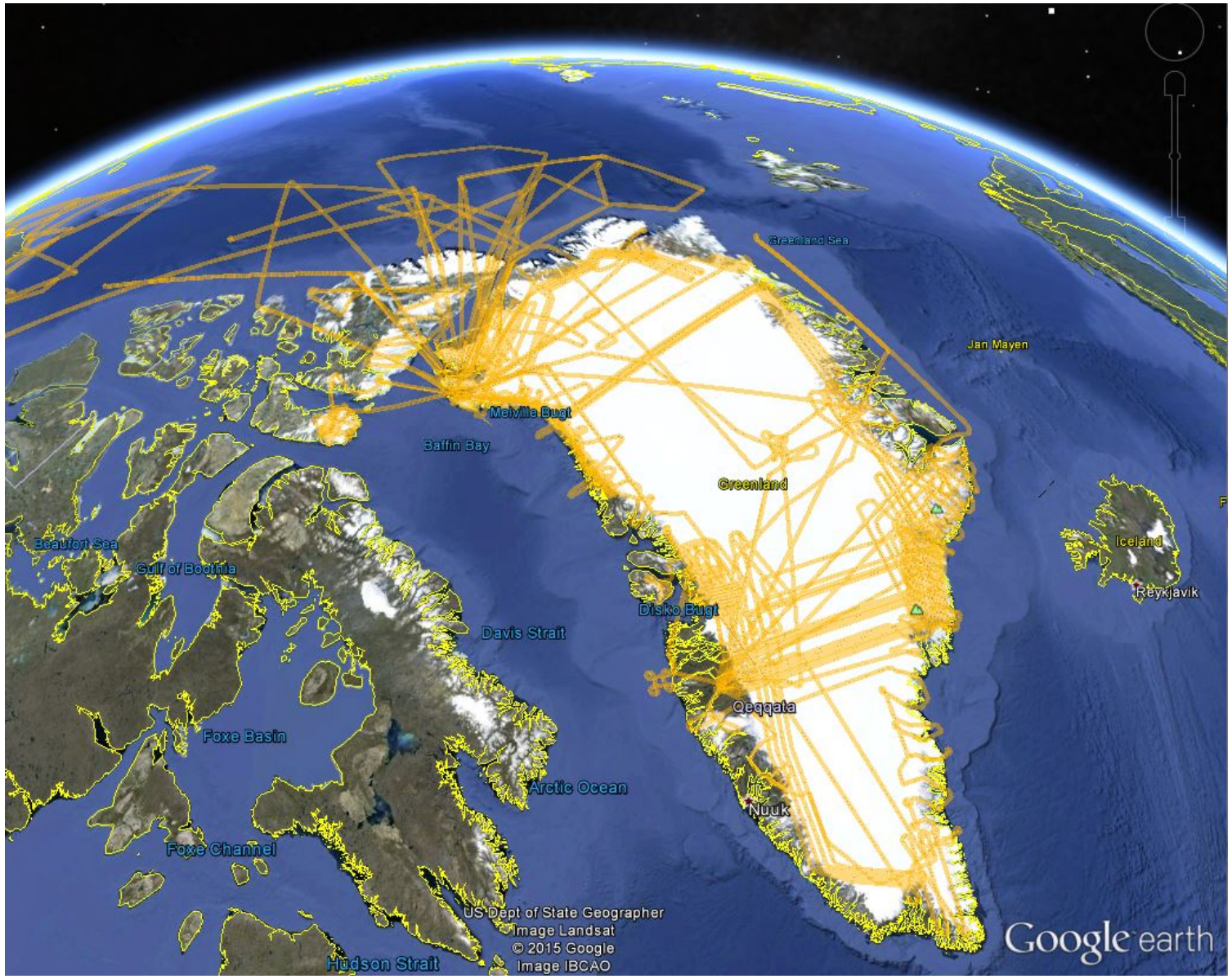
Element 84

About the CMR

- A search index for NASA EOSDIS and partner metadata.
- 30 data providers, 32K collections, 380M metadata records
- Metadata contains links to image/real data

What do I like about the API?

Performance

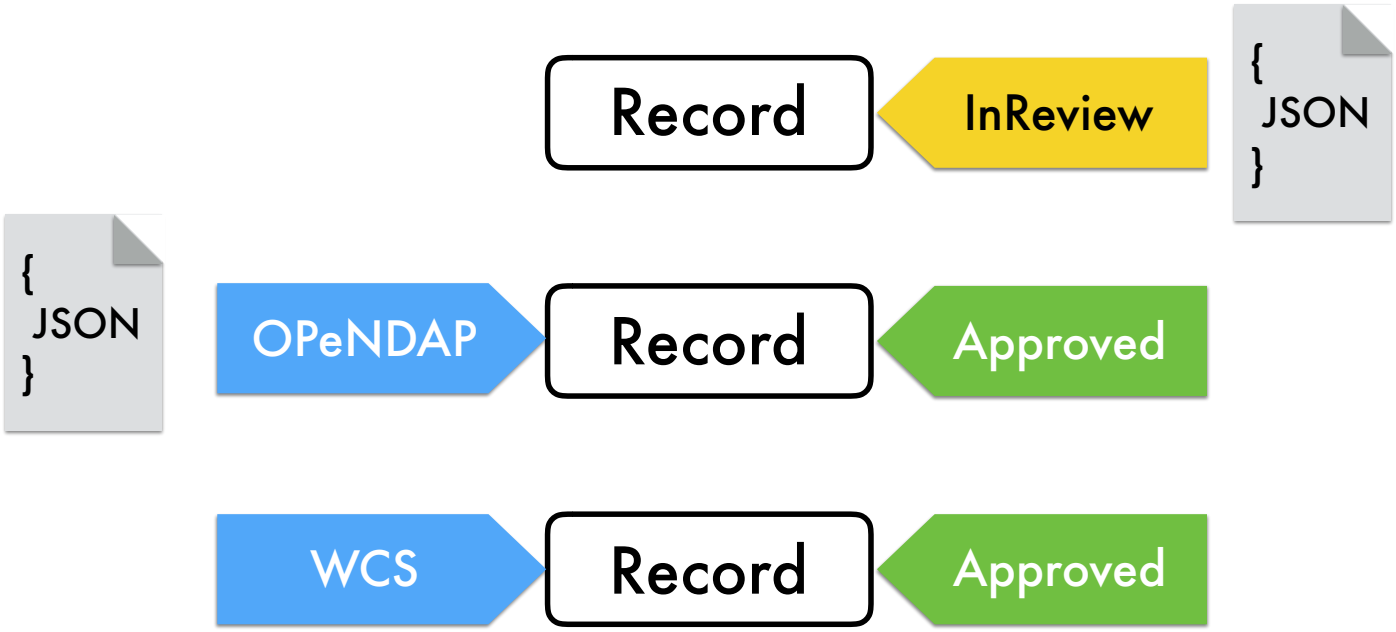

Greenland Sea
Jan Mayen
Melville Bugt
Baffin Bay
Greenland
Iceland
Reykjavik
Beaufort Sea
Gulf of Boothia
Disko Bugt
Davis Strait
Qeqqata
Foxe Basin
Arctic Ocean
Nuuk
Foxe Channel
US Dept of State Geographer
Image Landsat
© 2015 Google
Image IBCAO
Hudson Strait
Google earth

APIs Designed with Clients

Faceting that reduces client logic

(Browser Demo)

Client Namespaced Tags



Search Client

Review Client

What could be done differently?

What could be done differently?

- Reduce impact of legacy API concerns
- Embrace standards
- Use HATEOAS
- Build a lightweight client to test API assumptions

The Most Important Thing™ for our group to get right

User Experience

Client Developer Experience

- How hard is the API to use?
- What are it's limitations?
- What experiences does it enable them to build?

Carnegie Mellon
Software Engineering Institute
Pittsburgh, PA 15213-3890

Achieving Usability Through Software Architecture

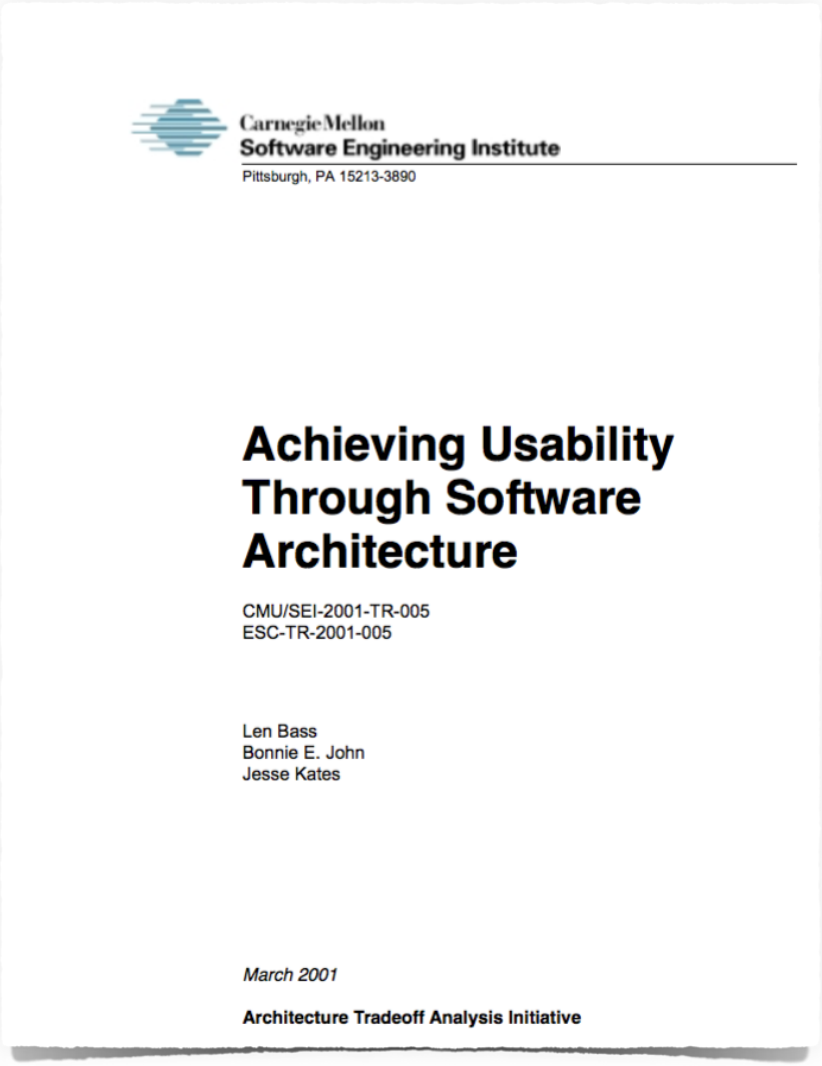
CMU/SEI-2001-TR-005
ESC-TR-2001-005

Len Bass
Bonnie E. John
Jesse Kates

March 2001

Architecture Tradeoff Analysis Initiative

in the life cycle that a problem is detected, the more expensive it is to fix. Furthermore, the architectural separation of presentation from application is insufficient to achieve usability because many usability concerns reach deep into the application, beyond the presentation layer. Cost and schedule pressures, then, often prevent many modifications from being implemented.



- Undo
- Aggregate commands
- Cancel commands
- Validations
- Information Reuse

Thank you!

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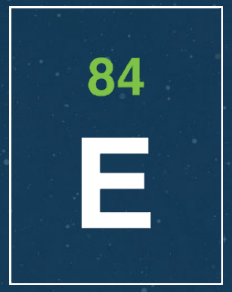

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