

Implantation of OGC geoprocessing services for Geoscience

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Setting the context

- Focus on OGC Web Processing Service 1.0.0 (2007)
 - Simple HTTP interface
 - Publish (geo) processing algorithms
 - Describe + Execute
 - Scalable
 - Web accessible outputs
 - Long-running requests
 - Interoperability features
 - Application profiles
 - WSDL/SOAP support
- +15 products implement WPS 1.0.0



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Questions on public OGC geoprocessing services

- Can be found using Web indexing systems?
- Localization?
- Scalable geoprocessing Web support?
- Geoscience support?



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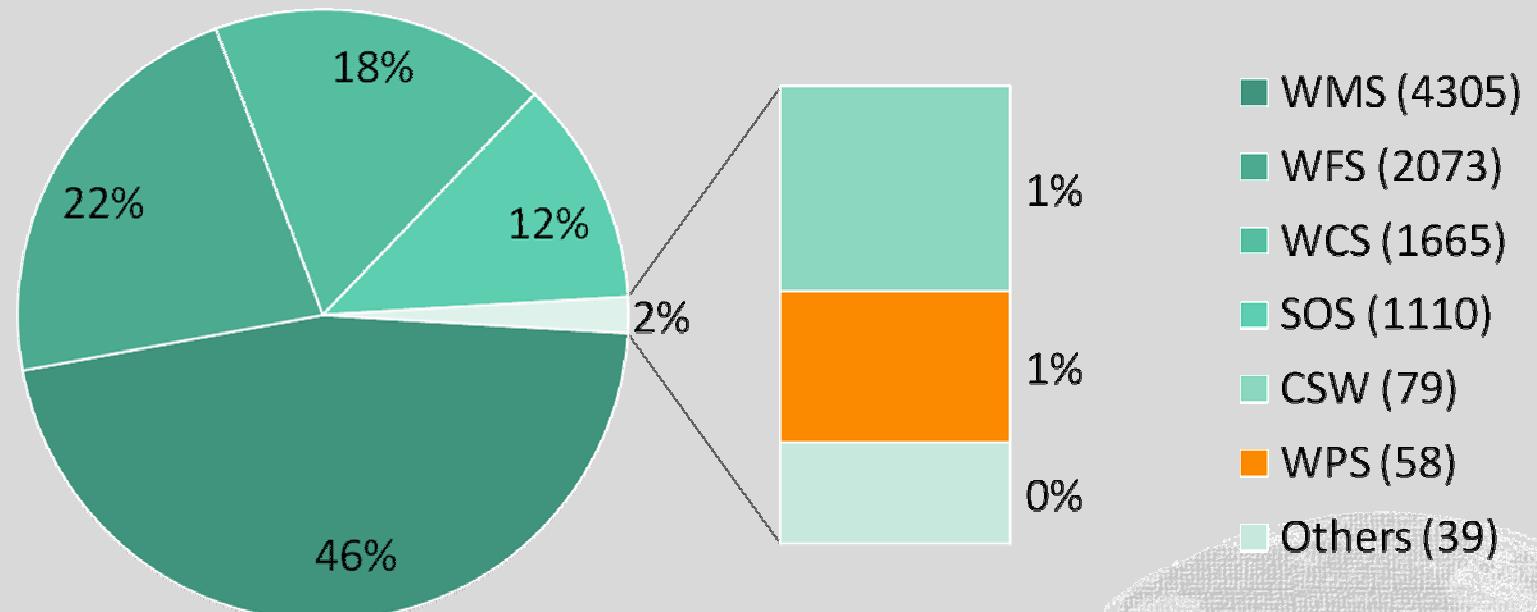


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Can be found using Web indexing systems?

- March 2011: Our crawler found 9239 public OGC Web services
 - Only 58 were WPS



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Localization?



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Scalable geoprocessing Web support?

- 1316 processes offered
 - Median 4 processes per service
 - But 3 services offer 750 processes (!)
- Good news
 - 92% storage of outputs in server
 - 75% long running requests
- Bad (semantic interoperability) news
 - Spartan (even missing) human-readable documentation
 - Rare machine-readable documentation (no profiles, no ISO metadata)
- Bad (technical interoperability) news
 - Mangled URL endpoints



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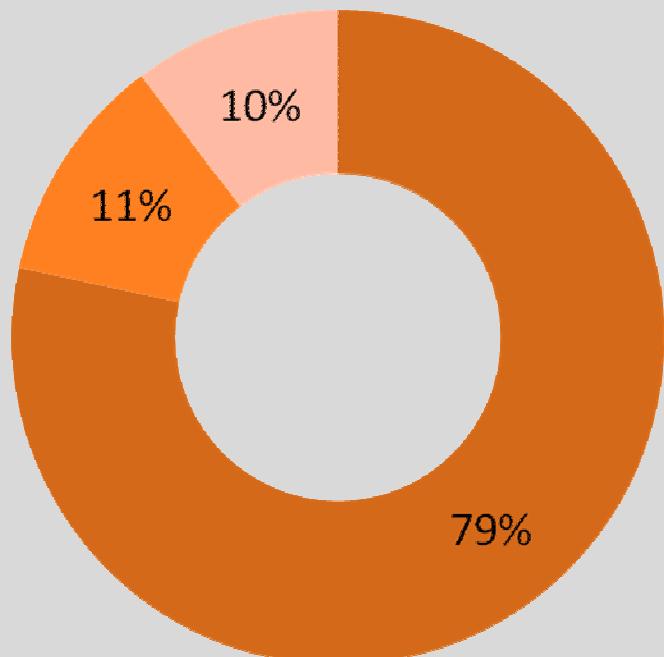


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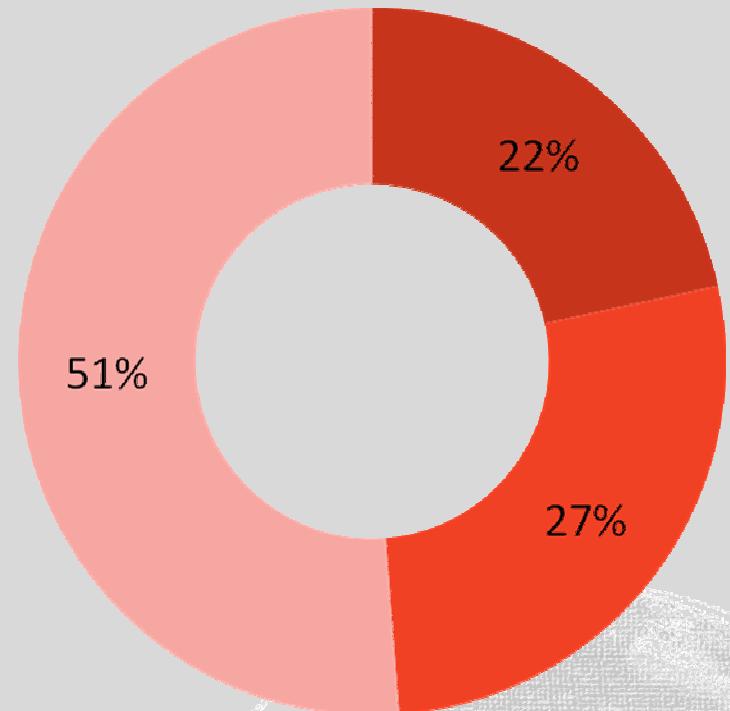
Geoscience support?

Geoscience processes



■ Simple (1032) ■ Complex (149) ■ No (135)

GRASS commands



■ GRASS (284) ■ GRASS-like (358) ■ No (674)



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Summary

- Can be found using Web indexing systems? **YES**
 - Less than expected (58 out of 9239)
 - These results only shows VISIBLE trends!
- Localization? **EUROPE**
 - Germany (obvious) and especially Spain (less obvious)
- Scalable geoprocessing Web support? **BARRIERS DETECTED!!!**
 - Scarce descriptions, no application profiles, few WSDL support
- Geoscience support? **YES**
 - Reuse requires human intervention
- More details...
 - Forthcoming Special Issue Computers & Geosciences
“Towards a Geoprocessing Web”



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