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# Knowledge Centred Earth Observation (KEO): A service oriented architecture for information discovery and exploitation

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## The KEO Vision

*"The information extraction process  
must be replaced by more  
automated, direct and human  
centered methods"*

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ADVANCED COMPUTER SYSTEMS



## Automated, Direct and Human Centred


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- **“Automated”** is a consequence of the data size / complexity and of the cost of the non-automatic process.
- **“Direct”** responds to the need to reducing the steps between the user and the information
- **“Human centred”** brings the focus on systems that could be managed also by non-EO experts via semantic interactions

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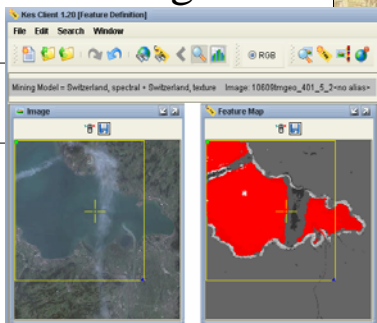
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ADVANCED COMPUTER SYSTEMS

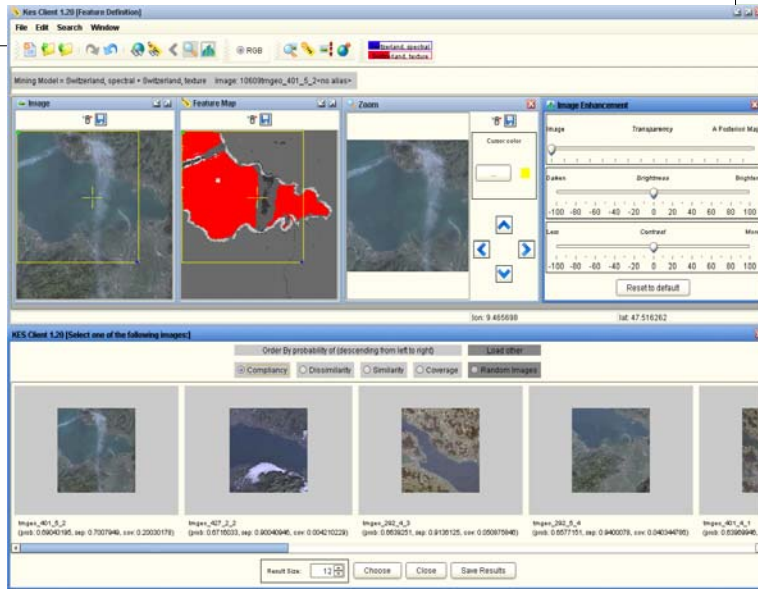


## Image Information Mining

- Capabilities
  - Image search also by [content](#)
  - Discovery in [image archives](#)
  - Interactive [image interpretation](#)
  - Access to [features](#) (future)
- Status / Plans
  - Feature Extraction Algorithms (FEAs) surveyed
  - Probabilistic Information Mining (PIM) prototype (KIM) validated
    - Implement PIM for MERIS and link with SSE (Cloud-free Service)
    - Merge PIM and FEAs into a single environment (KEO) and link with SSE
    - Implement the environment also at DLR (TerraSAR and other SSE services)

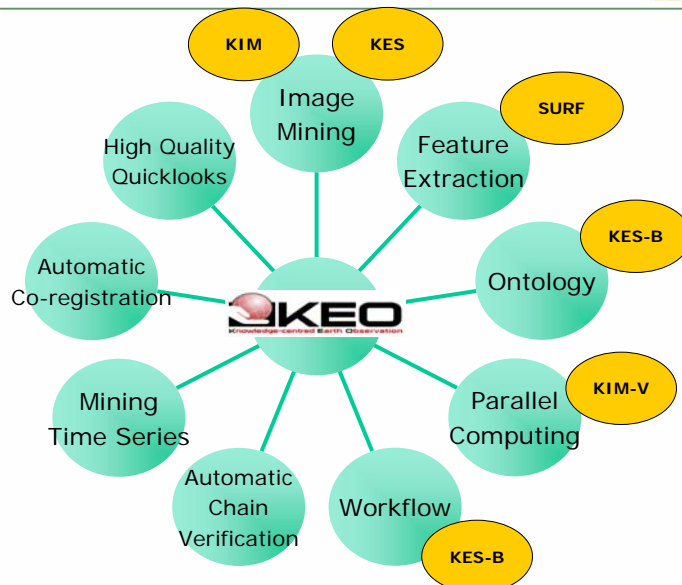


# Knowledge-based Information Mining



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# KEO



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Thanks for your attention

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