Helping to define NASA Open Source Strategy

- Oral Session accepted for 2011 Fall AGU Meeting and poster session accepted for 2011 Fall AGU Meeting, which includes papers and posters by ESDS SRWG members. Co-Chairs: Mattmann CA and Downs RR
- Gave one of only 2 agency talks at the 1st ever NASA Open Source Summit
- Working strategy with F. Lindsay and S. Berrick for Open Source and Reuse
- Coordinating with NASA CIO's Office Including T. Lee, N. Skytland.
- Co-convened poster session on software reuse and open source software at the 2010 Fall AGU Meeting

Reusable Readiness Levels (RRLs)

<table>
<thead>
<tr>
<th>Level</th>
<th>Reuse Readiness Level (RRL) Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>RRL 1</td>
<td>Limited reusability; the software is not recommended for reuse.</td>
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<tr>
<td>RRL 2</td>
<td>Basic reusability; the software may be reusable by skilled users with some effort, cost, and risk.</td>
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<tr>
<td>RRL 3</td>
<td>Partial reusability; the software can be reused by most users with minimum cost and risk.</td>
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<tr>
<td>RRL 4</td>
<td>Complete reusability; the software is reusable by most users with minimum cost and risk.</td>
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<tr>
<td>RRL 5</td>
<td>Demonstrated local reusability; the software has been reused by multiple users.</td>
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<tr>
<td>RRL 6</td>
<td>Demonstrated node reusability; the software is being reused by many classes of users over a wide range of systems.</td>
</tr>
</tbody>
</table>

The Software Reuse WG continues to identify improvements for the RRLs (http://www.esdswg.com/softwarereuse/Resources/rrls/RRLs_v1.0.pdf/view)

Packaging Reusable Assets

- Software Packaging
- Domain Information Model
- Boxes at right represent concepts (attributes) relevant to the software packaging. Lines show their relationships and "†" indicates each relationship's cardinality.


Publications and Presentations

  http://dx.doi.org/10.1109/IIRI.2011.6009611
  http://dx.doi.org/10.1109/IGARSS.2010.5653018
  http://dx.doi.org/10.1109/IIRI.2010.5558912

Decadal Survey Missions

- **SMAP**
  - Using RRLs to improve the procedure and template for making RRL assessments in conjunction with CMMI process
  - RES Evaluation

- **ICESat-2**
  - Developed initial draft of a procedure and template for making RRL assessments
  - Use case document development with ICESAT-2, including ICESAT-2 participation in Reuse WG

- **DESDynl**
  - Continuing discussions

- **OCO-2/ACOS**
  - Continuing discussions

Social Networking Sites

- Twitter feed – http://twitter.com/esdswg_reuse
- 4 followers, 3 from the Reuse WG
- Facebook group – http://www.facebook.com/group.php?gid=117453644936920
  - 21 members, 6 from the Reuse WG
- LinkedIn group – http://www.linkedin.com/groups/?gid=2964349
  - 8 members, 7 from the Reuse WG

Authors:

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- Robert R. Downs (WG Co-Chair), CIESIN, Columbia University
- Paul Ramirez, NASA JPL
- Cameron Goodale, NASA JPL
- Andrew Hart, NASA JPL

For more information, please visit http://www.esdswg.com/softwarereuse