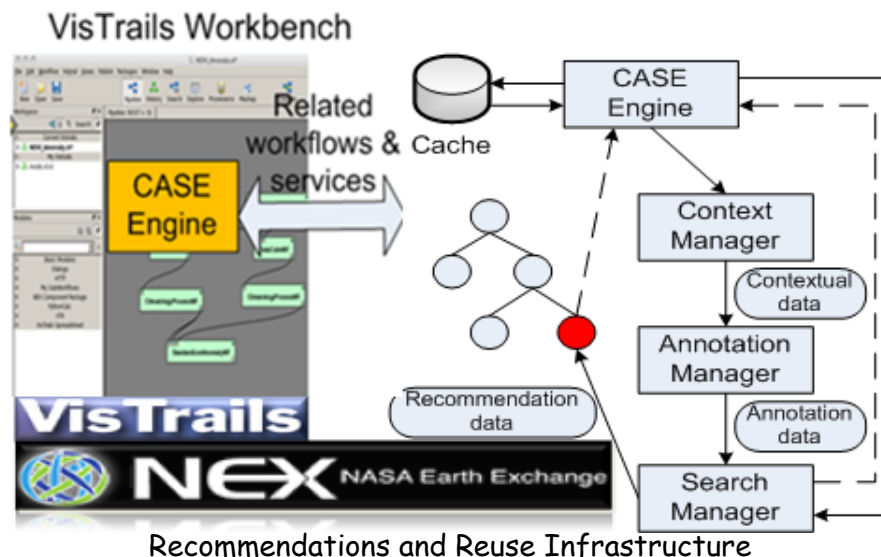


A Community-Driven Workflow Recommendations and Reuse Infrastructure

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Objective

- Develop a recommendation tool within the NASA Earth Exchange (NEX) to facilitate component and workflow reuse, and enable virtual collaboration.
- Leverage social network analysis to extract hidden knowledge of operational scenarios from NEX user behaviors.
- Develop a workflow development environment that recommends components as workflows to make workflow development faster and help Earth scientists leverage best practices.



Accomplishments

- Built People-Data-Workflow-Service (PDWS) knowledge networks to model workflow-centric user behaviors
- Developed algorithms to derive interaction patterns from PDWS networks
- Developed a prototyping system as a recommendation plug-in to NEX workflow design system (VisTrails)
- Demonstrated functionality with a limited user population

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TRL_{in} = 3 TRL_{out} = 4