Interoperability framework
and
Taverna

Interoperability framework

- The IMPACT Interoperability Framework (IIF) provides the interoperability layer for the software components and content developed in the IMPACT project.

- The technical and research partners in IMPACT developed more than 20 different tools for various stages in the OCR process.

- IMPACT has therefore also developed an overall technical framework that allows for a loose coupling of these tools and the exchange of data between them.

Interoperability framework

- With this framework it is possible to form a pipeline of the tools, where the output of one tool is used as input for the next tool.

- There is no optimal combination of tools (called a workflow) for every purpose.

- Users have to be enabled to try and evaluate certain combinations to find their optimal workflow.
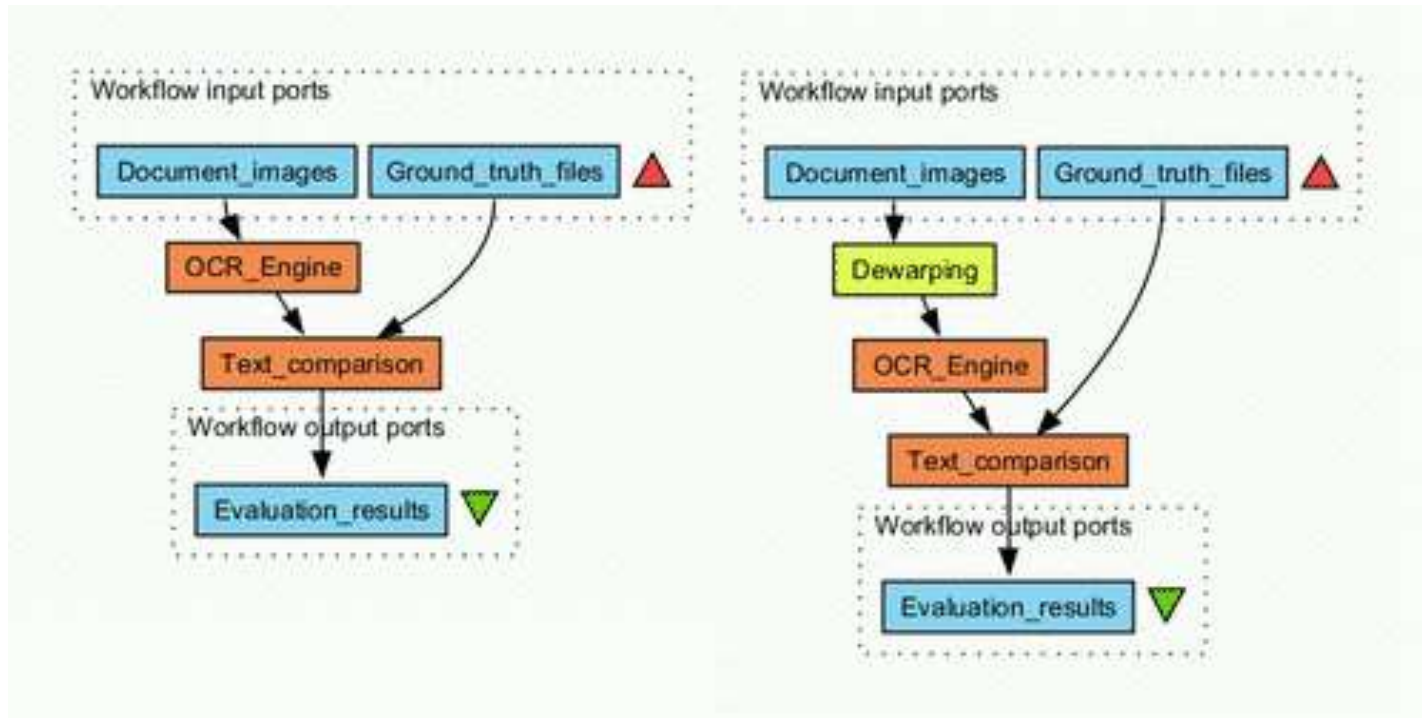
Interoperability framework

- To fulfil these requirements, each IMPACT tool was wrapped as a web service, using a generic Java-wrapper.

- All the web services together with common open source components from the Apache Software Foundation form the basic layer of the Interoperability Framework.

Workflows

- Each tool(web service) is represented as a workflow module for Taverna.

Taverna

- A workflow language based on a dataflow model.

- A graphical editing environment for that language.

- An invocation system to run instances of that language on data supplied by a user of the system.

- When you download it you get all this rolled into a single piece of desktop software

Taverna

• To easily create complex workflows from single tools, the Taverna workflow system has been added as another layer to the Interoperability Framework.

• [Taverna](#) is an open source and domain-independent suite of tools to design and execute workflows.
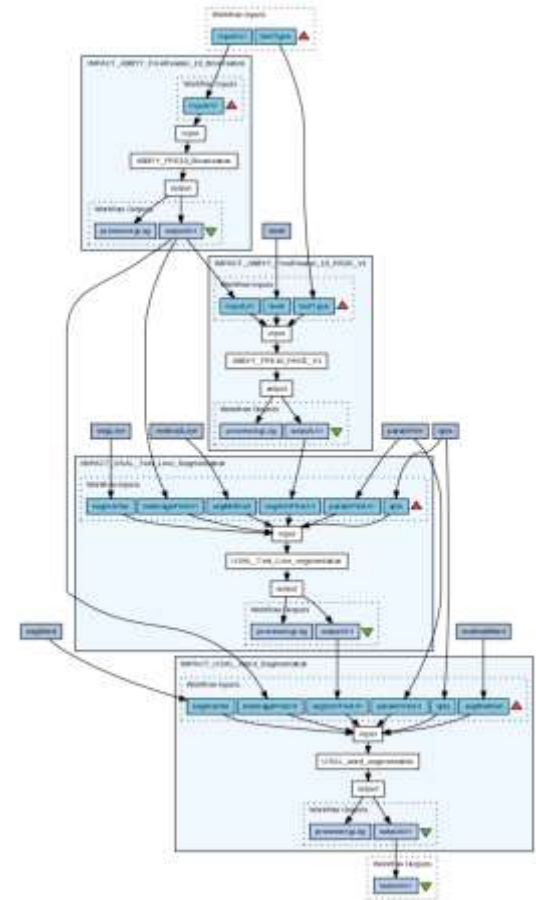
Taverna

• The output of one tool can then be connected to the input of another by a simple drag-and-drop operation.

• Allows non-expert users to quickly create their own workflows and obtain results.

Workflows

- OCR workflow = data pipeline

- Building blocks = processing modules (nodes)

- Integration = interaction between nodes (mashups)

Community

- Ready-to-use and documented resources

- Community of experts

- Sharing of experiments and know how

Demo