Towards Using Explicit Semantics in Life Science Workflows

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Dr. José F. Aldana Montes (jfam@lcc.uma.es)
Ismael Navas Delgado (ismael@lcc.uma.es)
Goals

- To detect common problems in bioinformatics (from our experience): Lack of Semantics

- To propose architecture to build workflows composed of semantic web services
Lack of Semantics

PROTEIN SEARCH

GENE SEARCH

PROTEIN ALIGNMENT

STRING (A PROTEIN)

STRING (A PROTEIN)

STRING (A PROTEIN)

STRING (A PROTEIN)

STRING (A PROTEIN)

STRING (A GENE)
Lack of Semantics

PROTEIN SEARCH

FASTA SEQUENCE

PIR SEQUENCE

PROTEIN EXTRA INFORMATION

K.h.a.o.s
INVESTIGACION
Non Expert Users

WORKFLOW MANAGER

QUERY ENGINE

WORKFLOW INTERFACE

NON EXPERT USERS

WORKFLOW MANAGER

QUERY ENGINE

SEMANTIC WEB
SERVICE DATABASE

WORKFLOW DATABASE

ENACTOR

ADAPTORS

SERVICE

SERVICE

SERVICE

SERVICE
Adaptors

PROTEIN SEARCH

PROTEIN SEQUENCE (FASTA SEQUENCE)

ADAPTOR: FASTA TO PIR

PROTEIN SEQUENCE (PIR SEQUENCE)

PROTEIN EXTRA INFORMATION
Contact

Ismael Navas-Delgado
ismael@lcc.uma.es

José F. Aldana-Montes
jfam@lcc.uma.es

http://khaos.uma.es

THANKS.