Using SPEAK (Search Process of Engineering for Assimilation of Knowledge) in GPRM (Global Project for Research Management)

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Abstract

A generic framework to search in Metadata

This poster presents the SPEAK framework working with the GPRM solution. SPEAK is defined as an architecture acting as a service under a web-server. SPEAK mainly task is to promote a distributed middleware where applications of several kind (like GPRM) can submit searches in Metadata like XML or other known file types, retrieving digest and statistic information.
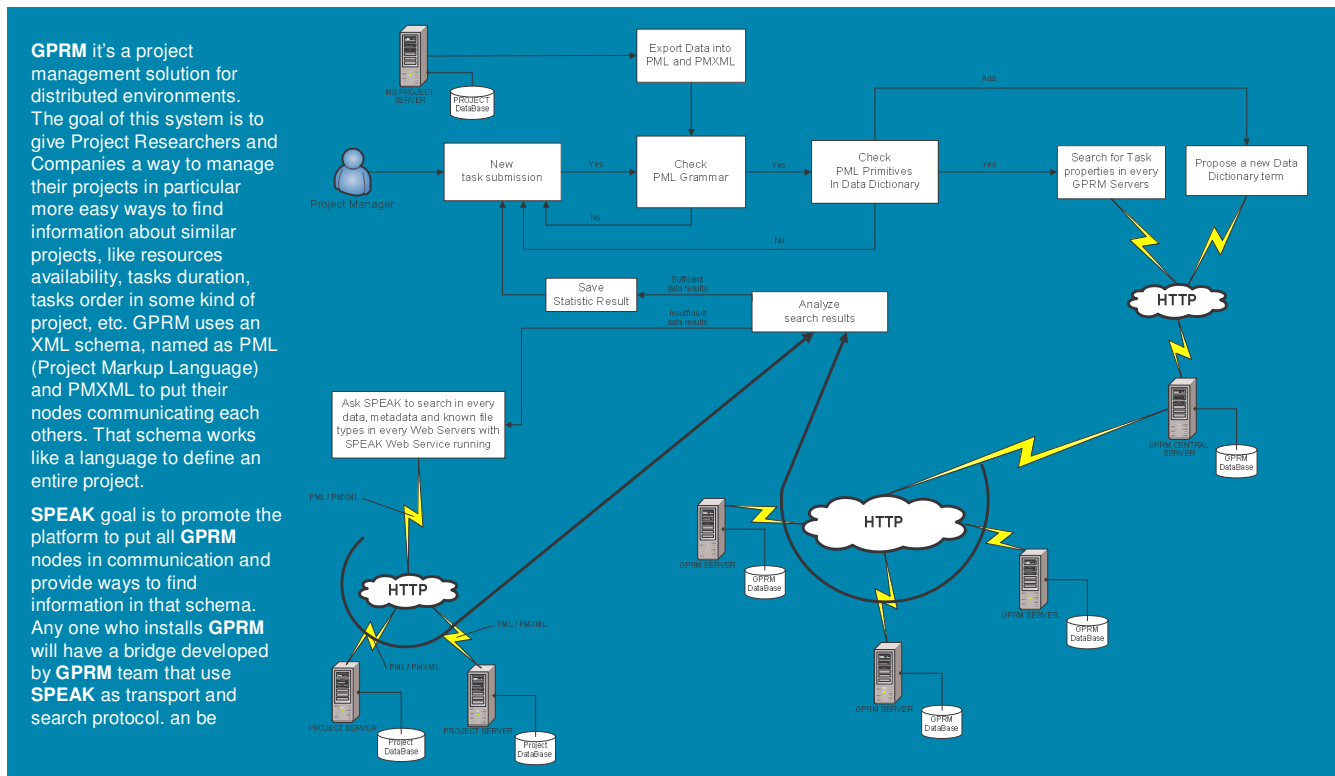
SPEAK Server act as an inverted index like Google but only for dedicated applications to get objective answers.

Any one can use SPEAK to search and to register his contents, textual or normalized, including local schemas to represent their contents and metadata. SPEAK index metadata is based on MITRA general way to index XML and Text.

SPEAK Client applications (like GPRM) can submit queries specifying a schema and the values to find in specific fields of those schemas. SPEAK will promote statistic information results like average, maximum or minimum values for each searched field.

In this case, GPRM, normally wants to know the less or the average duration for a specific task, also the average cost, etc. But SPEAK can be used by other applications like e-commerce or e-business. In that case SPEAK can give the cheaper price of a product or even the fastest way to do something. SPEAK results are not link pages, but digest information based on statistic and numeric information.
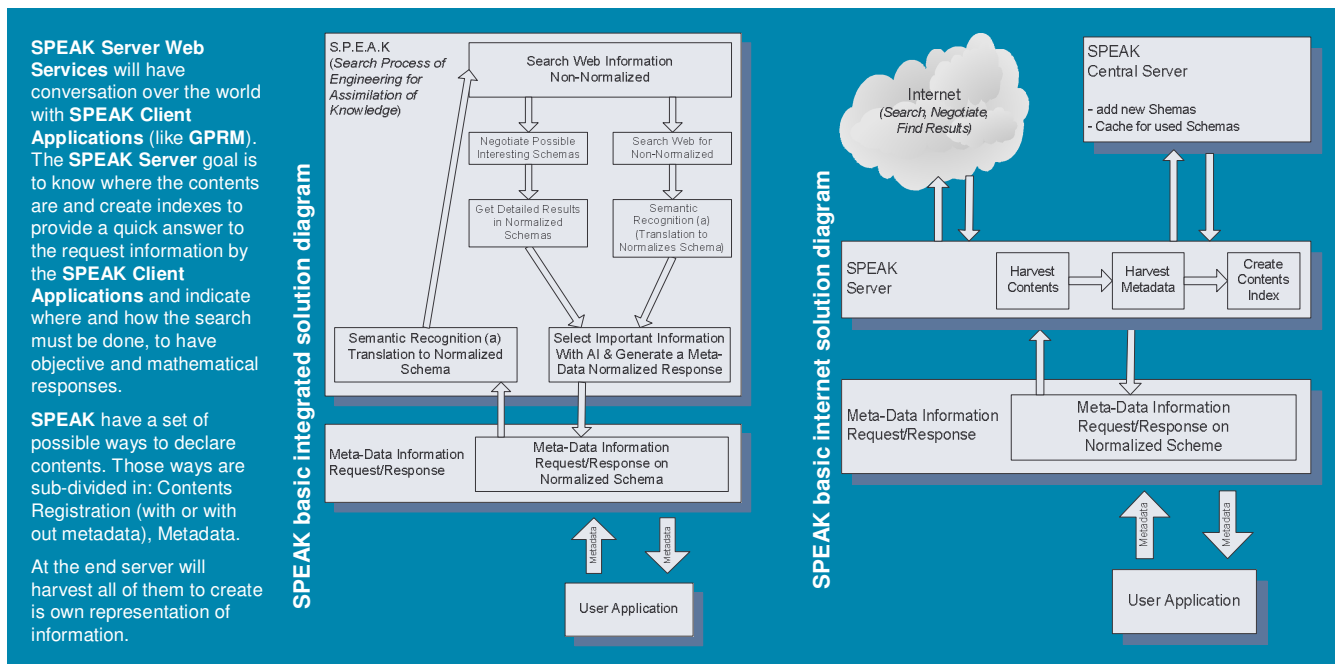
Functional Diagram

GPRM it's a project management solution for distributed environments. The goal of this system is to give Project Researchers and Companies a way to manage their projects in particular more easy ways to find information about similar projects, like resources availability, tasks duration, tasks order in some kind of project, etc. GPRM uses an XML schema, named as PML (Project Markup Language) and PMXML to put their nodes communicating each others. That schema works like a language to define an entire project.

SPEAK goal is to promote the platform to put all **GPRM** nodes in communication and provide ways to find information in that schema. Any one who installs **GPRM** will have a bridge developed by **GPRM** team that use **SPEAK** as transport and search protocol. an be

Basic-Class Diagram

SPEAK Server Web Services will have conversation over the world with **SPEAK Client Applications** (like **GPRM**). The **SPEAK Server** goal is to know where the contents are and create indexes to provide a quick answer to the request information by the **SPEAK Client Applications** and indicate where and how the search must be done, to have objective and mathematical responses.

SPEAK have a set of possible ways to declare contents. Those ways are sub-divided in: Contents Registration (with or without metadata), Metadata.

At the end server will harvest all of them to create is own representation of information.

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