

## PMAF: Pedigree Management and Assessment Framework

### At a Glance

PMAF is a customizable framework for writing, retrieving and assessing information pedigree and other metadata that determines the quality of information. PMAF works in concert with both new and existing applications to generate and store the history of information objects, and to query that pedigree metadata to evaluate the level of trust that can be placed in the information.

### What Is Information Pedigree?

- Pedigree is metadata regarding the provenance of information: its source, manner of collection, and chain of modification
- More broadly, pedigree can also refer to any metadata relevant to assessing information quality – such as domain- and source-specific metadata indicating qualifications of authors, spatial location, sensor accuracy, etc.
- Pedigree is used to establish trust, ensure accountability, discover sources of errors, and correct propagated errors



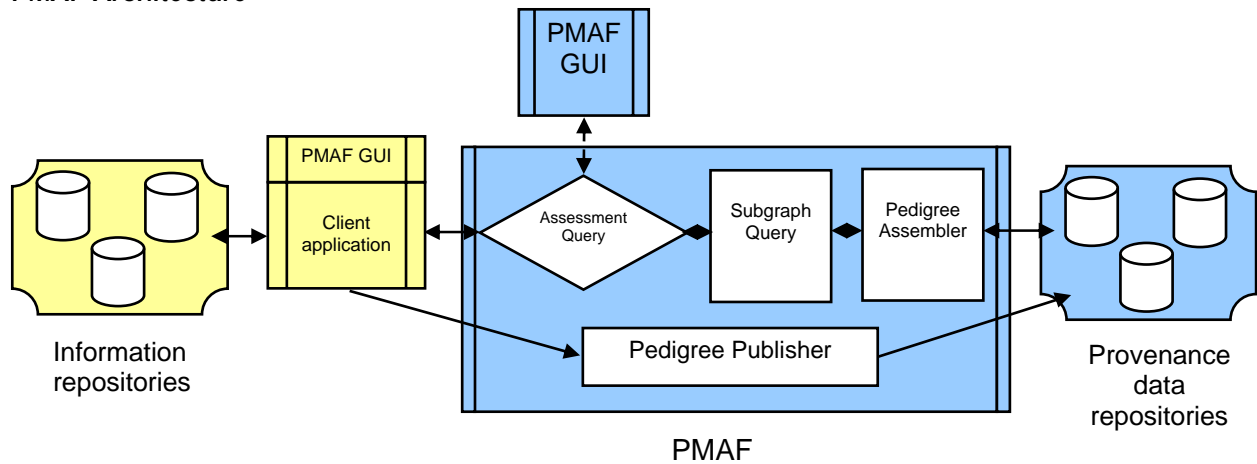
### What Kinds of Information and Metadata?

- Documents: author, date of creation, ...
- Web pages: web address, date of last modification, ...
- Images: resolution, time of capture, ...
- Sensors: accuracy, location, ...
- Web services: resources used, algorithm used, ...
- Software agents: creator, data format, ...
- All: "contains", "replaces", modifications, feedback, conflicts, ...

### PMAF Features

- General-purpose, extensible framework for net-centric information systems
- Writes and queries pedigree metadata in a volume-efficient distributed format
- Writes and queries pedigree metadata at a fine-grained level
- Supports customized pedigree-based assessments to establish quality and trust in information
- Supports domain-specific terminology
- Provides interactive browsing of pedigree through a graphical user interface
- Provides web service and Java API's
- Operates in a variety of information management environments – open system

## PMAF Architecture



- One or more information repositories – each object has a unique identifier
- A client application that reads and writes information objects and the corresponding pedigree data
- One or more provenance repositories can be in different location(s) than the information repositories
- The PMAF system, which includes a server to manage the provenance repositories and provides API's for querying and publishing pedigree data
- The PMAF GUI can be used independently or embedded in the client application

## Packages and Requirements

Packages	Development	Production
Getting Started Guide	✓	✓
User Manual	✓	✓
Server Software	✓	✓
Support for 6 clients*	✓	✓
Sample Client Application	✓	✓
Pedigree Dataset and Assessments	✓	✓
Modular back-end database support**	✓	✓
License	1 year	Perpetual
2 days on-site training	✓	
90-day Warranty	✓	✓
1 year Maintenance and Support		✓

\* (6 sets of database credentials per 24-hour period)

\*\* Ships with support for Oracle 10g Express and PostgreSQL 8.2

### Training: \$7,500

2 days on-site training for up to 6 people

### Additional Maintenance and Support:

Includes Software Updates  
24X7 Support

Requirements	Development	Production
Windows XP, Windows Vista or Linux	✓	✓
Operating System	32- or 64-bit	64-bit
RAM	2 GB	32 GB
Processor	Dual-Core	2 Quad-Core, x86
Available Disk Space	200 MB	1 GB

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