It is time to face the Achilles' Heel of Computer Music regarding Digital Works Preservation and Maintenance
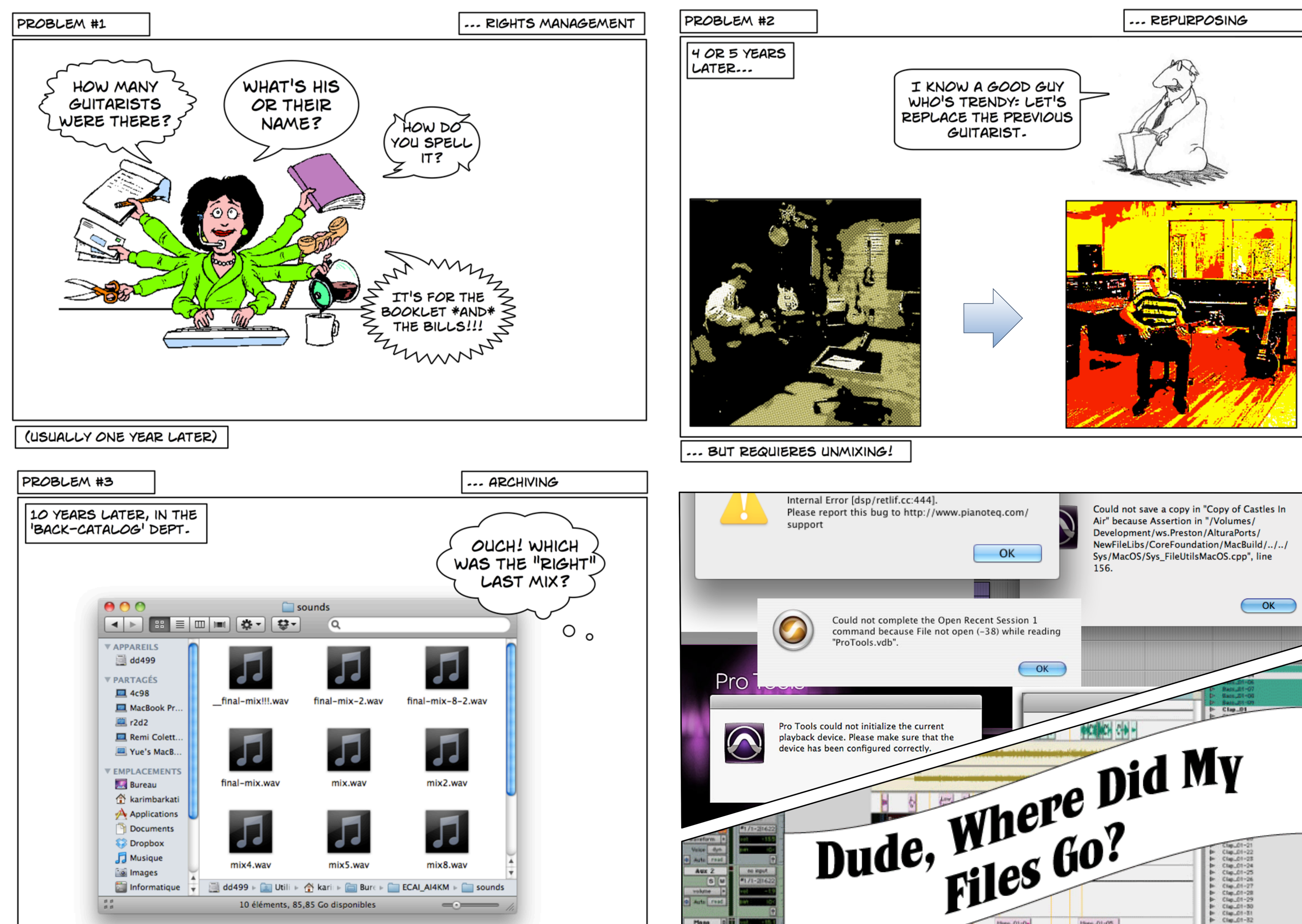
Common Digital Music Preservation Issues

PROBLEM #1 — ... RIGHTS MANAGEMENT

HOW MANY GUITARISTS WERE THERE?

WHAT'S HIS OR THEIR NAME?

HOW DO YOU SPELL IT?

IT'S FOR THE BOOKLET *AND* THE BILLS!!!

(USUALLY ONE YEAR LATER)

PROBLEM #2 — ... REPURPOSING

4 OR 5 YEARS LATER...

I KNOW A GOOD GUY WHO'S TRENDY: LET'S REPLACE THE PREVIOUS GUITARIST.

... BUT REQUIERES UNMIXING!

PROBLEM #3 — ... ARCHIVING

10 YEARS LATER, IN THE 'BACK-CATALOG' DEPT.

OUCH! WHICH WAS THE "RIGHT" LAST MIX?
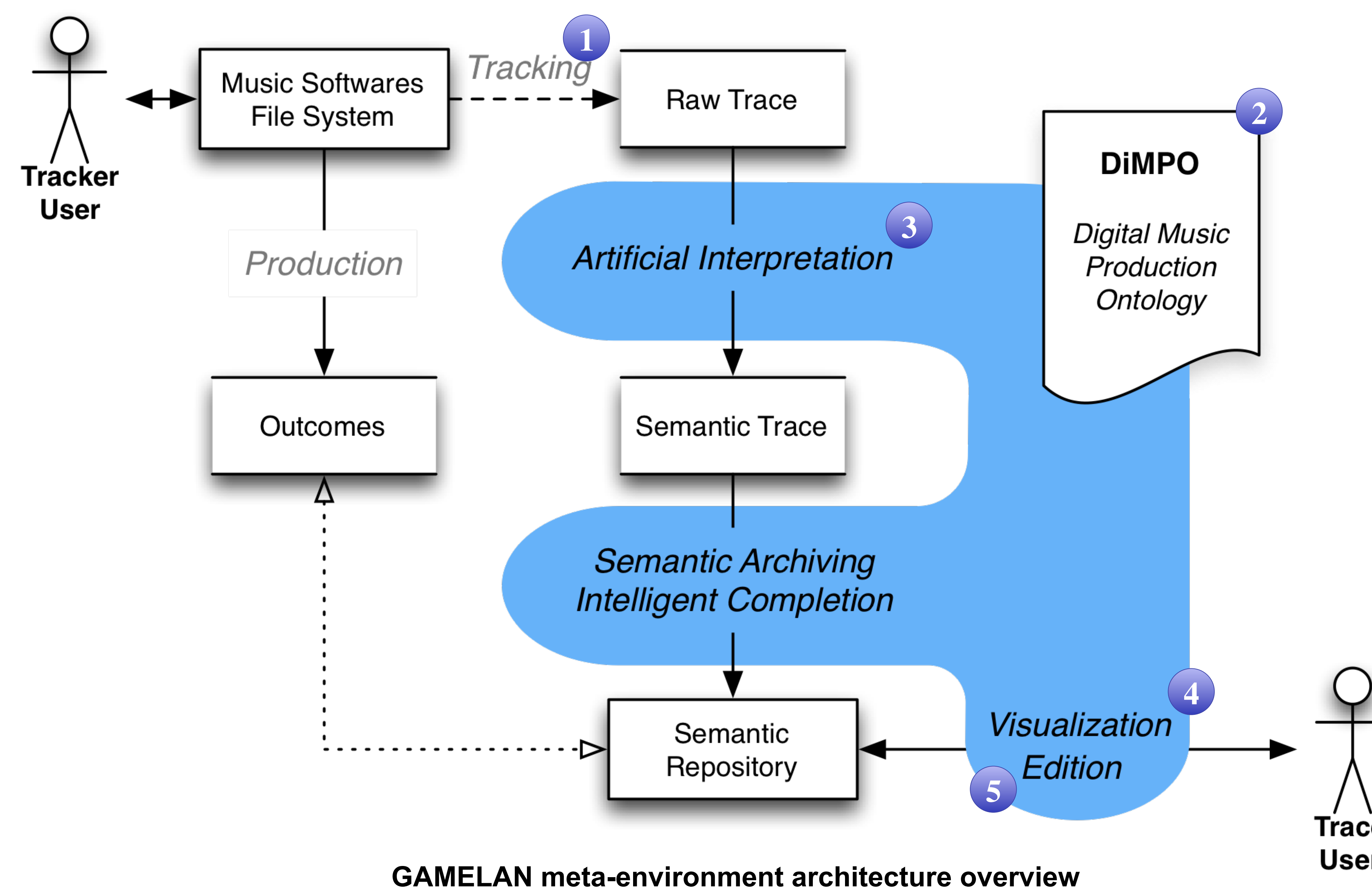
Dude, Where Did My Files Go?

Music tool design mainly focuses on the making of the final product, because the very first aim of the studio is to provide the creator with efficient means to make and shape the musical object he or she came in the studio for. But this requisite priority on creativity has overshadowed other needs that appear later: recovery and reconstitution.

The GAMELAN project demonstrated that appropriately using knowledge engineering techniques for trace-based systems [Laflaquiere 2006, Georgeon 2007], such as ontology making and semantic engines, we now have both theoretical and practical means to build a system that can help understanding digital studio outputs, *i.e.* effective means to bring music production data and process to the « Knowledge Level » [Newell 1982].

As far as we know, such a management and archiving system has not been built for music production before.

Knowledge Engineering Can Help!

GAMELAN meta-environment architecture overview

Digital studios trace a great amount of processes and artifacts. The important flow of these traces calls for a system to support their interpretation and reconstitution, beyond production software lifespan. Such a system has been designed and developed in the digital music production context, within the GAMELAN research project. This trace-based system is structured in three main layers:

➡ Tracking of production process;

➡ Interpretation of collected traces, according to a dedicated domain ontology;

➡ Assistance in querying and visualizing, to foster production archiving checking.

Results spread on several levels:

① an operational meta-environment with production tracking (GamelanTracker);

② a strongly-committed ontology for digital music production domain (DiMPO);

③ a raw trace interpreter (logs2dimpo);

④ a timeline visualizer (GamelanViewer);

⑤ a query management application (OwlimQueryManager), with a set of queries.

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Gestion et l'Archivage de la Musique Et de L'Audio Numériques