PHAROS: AN AUDIOVISUAL SEARCH PLATFORM USING MUSIC INFORMATION RETRIEVAL TECHNIQUES

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1. THE PHAROS PLATFORM

PHAROS [1] [1] is an Integrated Project funded by the European Union in the Sixth Framework Programme, aimed at building a platform for advanced audiovisual search applications. The Consortium comprises 12 partners from 9 European countries. [2] PHAROS unbundles the functionalities of an audiovisual search engine into an open service-based ecosystem, where content can be submitted to customized analysis pipelines, third-party annotation components can be plugged-in, and content based search engines can be registered. PHAROS enables a variety of application scenarios, from content acquisition and enrichment, to annotation fusion, to multi-modal queries. Figure 1 shows the architecture of PHAROS, which supports two main process: *Content Caption and Refinement* (CCR) executes flow of operators on the captured content and produces XML metadata (subsequently indexed by a core XML search engine) and derived artifacts(used for similarity querying and result presentation); *Query Execution and Result Presentation* (QUIRP) accepts a user's query (by keyword, by image similarity, by audio similarity, by video similarity), expands it with user's profile and social information, brokers its execution on the registered search engines, and presents results in a Rich Internet Interface.

2. DEMO

The demo exploits the online access to the PHAROS platform and its main functionalities: keyword and similarity search, query refinement, advanced result presentation, and query customization based on social information. The demo will focus on music retrieval applications. PHAROS includes content-based music similarity and annotation features. Any text query can be refined by music annotations,

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[1] http://www.pharos-audiovisual-search.eu

[2] Engineering Ingegneria Informatica S.p.A. (Italy, Project Coordinator), FAST a Microsoft Subsidiary (Norway), France Telecom (France), L3S Research Center (Germany), Fraunhofer IDMT (Germany), EPFL (Switzerland), Open University KMI (UK), Music Technology Group Universitat Pompeu Fabra (Spain), VTT (Finland), Circom Regional, SAIL LABS (Austria), and Web Models (Italy).
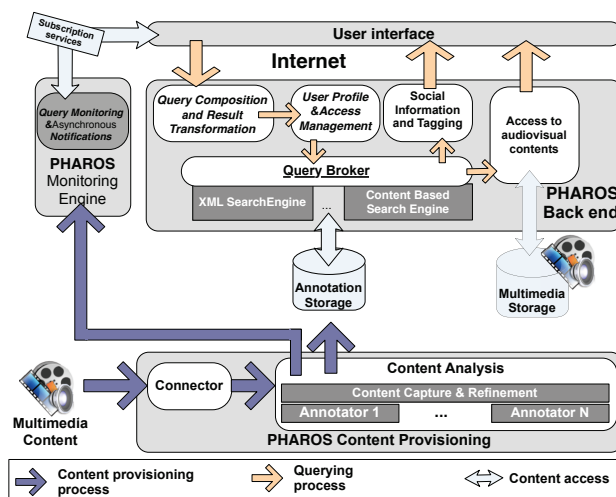
Figure 1. The PHAROS architecture

filtering the result set according to annotation values. For instance one can query for an artist typing his name and choose to see only the songs classified as "melancholic". Then one can query for similar music which will use content-based similarity. The PHAROS architecture also allows for multimodal queries and annotations. For instance we can combine audio annotations with image or video features.

3. ACKNOWLEDGMENTS

4. ADDITIONAL AUTHORS

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5. REFERENCES

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