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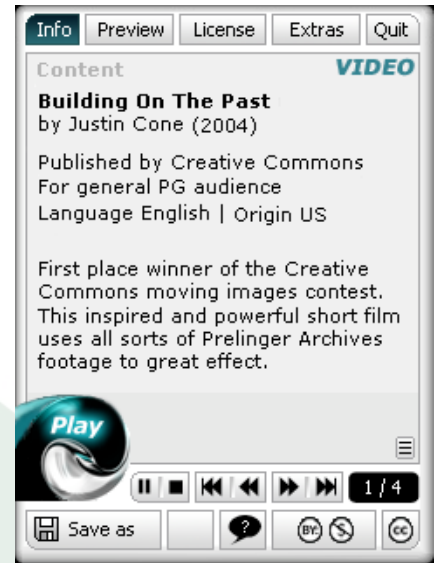
## DiMaS Distribution Package (DP)

Digital Content Distribution Management System DiMaS introduces scalable near-zero cost publication of multimedia content for amateur and professional producers on existing highly popular peer-to-peer (P2P) file sharing networks together with web sites and other traditional channels using novel DiMaS Distribution Packages. Importantly, DiMaS enables publishers to insert descriptions, to manage intellectual property and user rights, and to charge for the consumption. In addition, DiMaS offers its own, more business, end-user, and service oriented, multiplatform network backed with digital television settop boxes, and an extension of RSS and DVB broadcast for advanced content distribution.

However, leveraging current P2P file sharing networks for amateur and professional business faces significant issues: how to include the different content, rights, and charging descriptions in standardized metadata? How to bundle metadata and the actual content into one package rather than having them in separate files? How to make this package easily searchable and accessible by the end-user on various terminals, e.g., PC, PDA, and DTV, without creating another new file format and another new player application?

DiMaS addresses digital content distribution and consumption from the perspective of 1) consumers, 2) amateur producers, and 3) professional publishing; the consumers in easily finding and using the media they want, the amateur producers in making their creations available for large audiences, and the professional publishers in supporting their copyright and charging models. DiMaS achieves this by enabling P2P distribution of content and associated metadata, leveraging semantically rich metadata for finding and describing the content, and supporting feasible licensing, rights, and charging models.

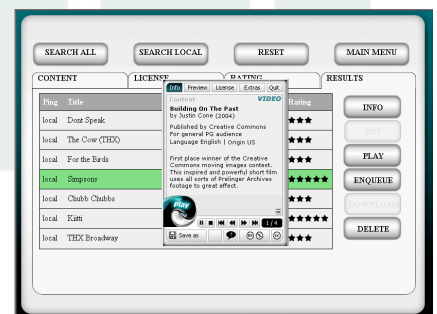
Distribution Package (DP), a part of DiMaS, is a novel way to bundle rich metadata files with the actual content into one executable file. The DP contains built-in logic and an adjusting multiplatform user interface for browsing content descriptions, viewing a preview file, purchasing the content, invoking the content for playing, and submitting feedback. The descriptions can contain multiple licenses, e.g., in human and machine readable format, separate license variations for different legal regimes and languages, and multiple expression languages, like both ODRL and MPEG-21 REL for the same content. Each of the description files can have a separate included schema or ontology file, a map to the data. DiMaS DP includes licensing history to track back the sources of derivative works. Further, it uses a PKI-like security model and digital signatures to ensure data integrity for safe content distribution.



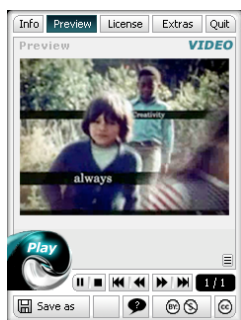
DiMaS DP built-in metadata browser

Built-in User Interface	<ul style="list-style-type: none"> <li>- simple to use</li> <li>- usable with mouse, stencil, and TV's remote control unit</li> </ul>	<ul style="list-style-type: none"> <li>- skinnable</li> <li>- multiplatform</li> <li>- Java AWT</li> </ul>	
Built-in Logic	<ul style="list-style-type: none"> <li>- metadata browser, verifier, and updater</li> <li>- simple SMIL player</li> <li>- play counter</li> </ul>	<ul style="list-style-type: none"> <li>- logic to buy content</li> <li>- to invoke external media player</li> <li>- to give feedback</li> </ul>	<ul style="list-style-type: none"> <li>Java</li> <li>- JAR File</li> <li>- Java VM required to run</li> </ul>
Content Files	<ul style="list-style-type: none"> <li>- Content File(s)</li> <li>- any file format</li> <li>- optionally encrypted</li> </ul>	<ul style="list-style-type: none"> <li>- Preview File</li> <li>- gif/png/dng</li> <li>- mpeg-2 video</li> <li>- SMIL control file</li> </ul>	
Content Metadata	<ul style="list-style-type: none"> <li>- Short Content Description</li> <li>- Dublin Core Element Set and DCMI Terms</li> </ul>	<ul style="list-style-type: none"> <li>- Content Specific Description</li> <li>- ontology-based</li> <li>- unlimited</li> </ul>	<ul style="list-style-type: none"> <li>XML/XSD</li> <li>RDF/XML</li> <li>OWL</li> </ul>
License Metadata	<ul style="list-style-type: none"> <li>- Multiple Licenses</li> <li>- human/machine readable format</li> <li>- source work licenses</li> </ul>	<ul style="list-style-type: none"> <li>- variations for legal regimes/languages</li> <li>- multiple expression languages</li> </ul>	<ul style="list-style-type: none"> <li>ASCII</li> <li>XML/XSD</li> <li>RDF/XML</li> <li>MPEG-21 REL</li> </ul>
Userrights Metadata	<ul style="list-style-type: none"> <li>- Pricing Models</li> <li>- pay per play/period</li> <li>- subscription</li> <li>- donation, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Rights Enforcement</li> <li>- strong encryption</li> <li>- digital signature</li> <li>- TPM support</li> </ul>	<ul style="list-style-type: none"> <li>MPEG-21 REL</li> <li>ODRL</li> <li>RSA/AES/SHA256</li> <li>TCG TPM 1.2</li> </ul>
Feedback Data	<ul style="list-style-type: none"> <li>- quantified feedback</li> <li>- unlimited number</li> <li>- subscription</li> <li>- real-time statistics</li> </ul>	<ul style="list-style-type: none"> <li>- graphical layout</li> <li>- yes/no question</li> <li>- pull-down selection</li> <li>- star rating</li> </ul>	<ul style="list-style-type: none"> <li>ASCII</li> <li>XML/XSD</li> </ul>
Extras Files/Links	<ul style="list-style-type: none"> <li>- Built-in Information</li> <li>- user guides/info</li> <li>- skins and updates</li> <li>- commercials, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Internet Links</li> <li>- content homepage</li> <li>- online stores</li> <li>- fan forums, etc.</li> </ul>	<ul style="list-style-type: none"> <li>ASCII</li> <li>URI/URL</li> </ul>

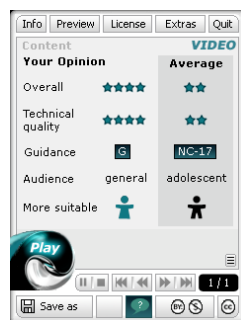
Structured design based on standards



DiMaS DP on a DiMaS Settop Box TV screen after DVB-T broadcasting



Built-in SMIL player



Socially interactive



Multiplatform and skinnable

