The problem

Art is about the process not about the outcome
Gino Ballantyne: As Long as the Band Plays and Everyone Marches in Step
The solution

• Capture the process
The solution for digital art

• Everything managed on the desktop
  – art/design software
  – stored/modified files
  – online research / communication

• Capture
  – technique
  – method / research
  – output
The solution for digital art

• Everything managed on the desktop
  – art/design software
  – stored/modified files
  – online research / communication

• Capture
  – technique
  – method / research
  – output

• Automate it!
NEPOMUK - The Social Semantic Desktop - FP6-027705

Networked Environment for Personalized, Ontology-based Management of Unified Knowledge

NEPOMUK brings together researchers, industrial software developers, and representative industrial users, to develop a comprehensive solution for extending the personal desktop into a collaboration environment which supports both the personal information management and the sharing and exchange across social and organizational relations.

The Social Semantic Desktop

Contact Information

<table>
<thead>
<tr>
<th>Name of coordinating person</th>
<th>Dr. Ansgar Bernardi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinating Organization</td>
<td>DFKI GmbH - Knowledge Management Department</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:info@nepomuk.semanticdesktop.org">mailto:info@nepomuk.semanticdesktop.org</a></td>
</tr>
<tr>
<td>Fax</td>
<td>+49 631 20575 102</td>
</tr>
</tbody>
</table>
W3C PROV ontology

Agent

Entity

Activity

wasDerivedFrom

wasAttributedTo

used

wasAssociatedWith

wasGeneratedBy
W3C PROV ontology

The thing that changed
W3C PROV ontology
W3C PROV ontology

Entity

wasDerivedFrom

wasAttributedTo

Agent

wasAssociatedWith

Activity

used

wasGeneratedBy

Who/what undertook action

The action that changed the thing

The thing that changed
Influence is the capacity of an entity, activity, or agent to have an effect on (...) another (...).
<table>
<thead>
<tr>
<th>App</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Illustrator CC 2015</td>
<td>OFF</td>
</tr>
<tr>
<td>Adobe Photoshop CC 2015</td>
<td>ON</td>
</tr>
<tr>
<td>Google Chrome</td>
<td>OFF</td>
</tr>
</tbody>
</table>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX prov: <http://www.w3.org/ns/prov#>

SELECT ?subtype ?objtype WHERE {
  ?sub prov:used ?obj .
  ?sub a ?subtype .
  ?obj a ?objtype .
}
as long as the band plays and...

drawing16.svg
drawing17.svg
drawing18.svg
drawing19.svg
drawing20.svg
drawing21.svg
drawing22.svg
drawing23.svg
drawing24.svg
drawing25.svg
drawing26.svg
drawing27.svg
drawing28.svg
drawing29.svg
drawing30.svg
drawing31.svg
drawing32.svg
drawing33.svg
drawing34.svg
drawing35.svg
drawing36.svg
drawing37.svg
drawing38.svg
drawing39.svg
drawing40.svg
drawing41.svg
drawing42.svg
elective psychopathy.svg

for the minds of people are...

sheetdrawing-15.svg
sheetdrawing-16.svg
sheetdrawing-17.svg
sheetdrawing-18.svg
sheetdrawing-19.svg
sheetdrawing-20.svg
sheetdrawing-21.svg
sheetdrawing-22.svg
sheetdrawing-23.svg
sheetdrawing-24.svg
sheetdrawing-25.svg
sheetdrawing-26.svg
sheetdrawing-27.svg
sheetdrawing-28.svg
sheetdrawing-29.svg
sheetdrawing-30.svg
sheetdrawing-31.svg
sheetdrawing-32.svg
sheetdrawing-33.svg
sheetdrawing-34.svg
sheetdrawing-35.svg

silkscript.svg
those little pills.svg
three steps.svg
trial
try2
wave
wave2
wave3
wave4
wave5
wave6
wave7
wave8
prefix nfo: <http://www.semanticdesktop.org/ontologies/2007/03/22/nfo#>
prefix prov: <http://www.w3.org/ns/prov#>

select distinct ?fileUrl ?creationDate
from <http://localhost:8890/artivity/1.0/{USERNAME}/activities>
where
{
    ?file a nfo:FileDataObject .
    ?file nfo:fileCreated ?creationDate .
}
order by desc(?creationDate)
Gino Ballantyne: As Long as the Band Plays and Everyone Marches in Step
prefix nfo: <http://www.semanticdesktop.org/ontologies/2007/03/22/nfo#>
prefix prov: <http://www.w3.org/ns/prov#>

select ?accessTime ?page ?fileUrl
from <http://localhost:8890/artivity/1.0/{USERNAME}/activities>
from <http://localhost:8890/artivity/1.0/{USERNAME}/activities/web>
where
{
  ?file a nfo:FileDataObject .
  ?editing prov:startedAtTime ?editingStart .
  ?editing prov:endedAtTime ?editingEnd .
  ?page a nfo:WebDataObject .
  filter(?editingStart <= ?accessTime && ?accessTime <= ?editingEnd)
}
order by desc(?accessTime) limit 50
Gino Ballantyne: As Long as the Band Plays and Everyone Marches in Step
(wifi – GPS data, tbd)
Potential answers

- One artist/artwork over time
  - development of work
  - development of technique
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX art: <http://w3id.org/art/terms/1.0/>  
PREFIX dc: <http://purl.org/dc/elements/1.1/>  
PREFIX prov: <http://www.w3.org/ns_prov#> 

SELECT DISTINCT ?activity ?time ?type ?description WHERE 
{

  ?influence a ?type .
  OPTIONAL { ?influence dc:description ?description . }

  FILTER(?type in (prov:Generation, prov:Revision, prov:Invalidation, art:Undo, art:Redo))
}

ORDER BY DESC(?time)
# Speed of work / Undos

<table>
<thead>
<tr>
<th></th>
<th>Gino</th>
<th>Peter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average: 2.237</td>
<td>Average: 1.52</td>
</tr>
<tr>
<td></td>
<td>Total actions: 20580</td>
<td>Total actions: 53850</td>
</tr>
<tr>
<td></td>
<td>Undos: 171</td>
<td>Undos: 319</td>
</tr>
<tr>
<td></td>
<td>1 undo per 120 actions</td>
<td>1 undo per 168 actions</td>
</tr>
</tbody>
</table>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX art: <http://w3id.org/art/terms/1.0/>
PREFIX dc: <http://purl.org/dc/elements/1.1/>
PREFIX prov: <http://www.w3.org/ns/prov#>

SELECT ?viewport ?factor WHERE {
}
Potential answers

• One artist/artwork over time
  – development of work
  – development of technique

• Many artists
  – overview of current trends
  – in an organisation/studio/class/department

• Many artists over time
  – Trends in digital arts over time
  – Trends in methods and online research
Who cares?

- Artists
  - self-archiving
- Researchers interested in art history
  - data about context – mode of work
- Researchers interested in technique
  - data about software tools and settings
- Authenticity of digital art
  - show how you did it
Who else?

- Group design
  - attribution – justification – annotation
- University administration
  - provide data for REF
- Teaching / learning
  - share instructions – automated assessment – evaluate exercises
- Developers of creative software
  - find out about the popularity / use of features
- Repository managers / digital archivists
  - collect data for long term preservation
Connect Account

Please select the account type to connect with:

- **Artivity**
  - http://artivity.online/.description

- **EPrints**
  - http://eprints.org/.description

- **ORCID**
  - http://orcid.org/.description
EPrints support in Artivity

- Publish Artivity datasets directly into EPrints
- Pre-filled deposit metadata:
  - Title
  - Abstract
  - Creators
  - Subjects
  - Item type
- EPrints plugin for Atom Publishing Protocol (optional)
Publisher Editing History

Create a dataset for your file and upload it into a digital repository.

**Title**

Artivity data for Artivity Poster.ai

**Abstract**

Test

**License**

Creative Commons BY-NC-ND
Faulbo, Sebastian. "Activity data for Activity Poster.ai." [Dataset]

Abstract

Test

Item Type: Dataset

Subjects: N Fine Arts > N Visual arts (General) For photography see TR
N Fine Arts > NX Arts in general

SWOR Deposit: Unnamed user with email admin@localhost

Depositing User: Unnamed user with email admin@localhost

Last Modified: 12 Dec 2016 09:50

URI: http://activity主持者主机 8080/localhost/epreprint/34
# Platform Support

<table>
<thead>
<tr>
<th>Operating Systems</th>
<th>Creative Tools</th>
<th>Web Browsers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubuntu</td>
<td>Inkscape</td>
<td>Mozilla Firefox</td>
</tr>
<tr>
<td>Mac OS X</td>
<td>Krita</td>
<td>Google Chrome</td>
</tr>
<tr>
<td>Windows</td>
<td>Photoshop CC</td>
<td>Opera</td>
</tr>
<tr>
<td></td>
<td>Illustrator CC</td>
<td></td>
</tr>
</tbody>
</table>