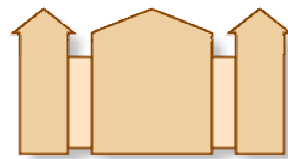


Smart Style on the Semantic Web

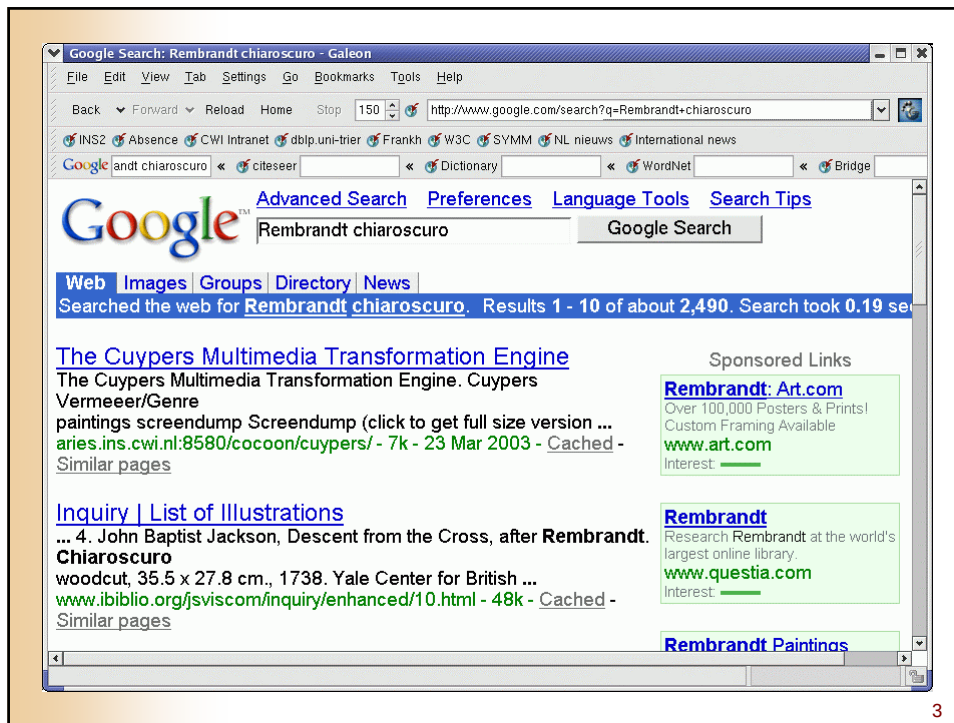
Lynda Hardman



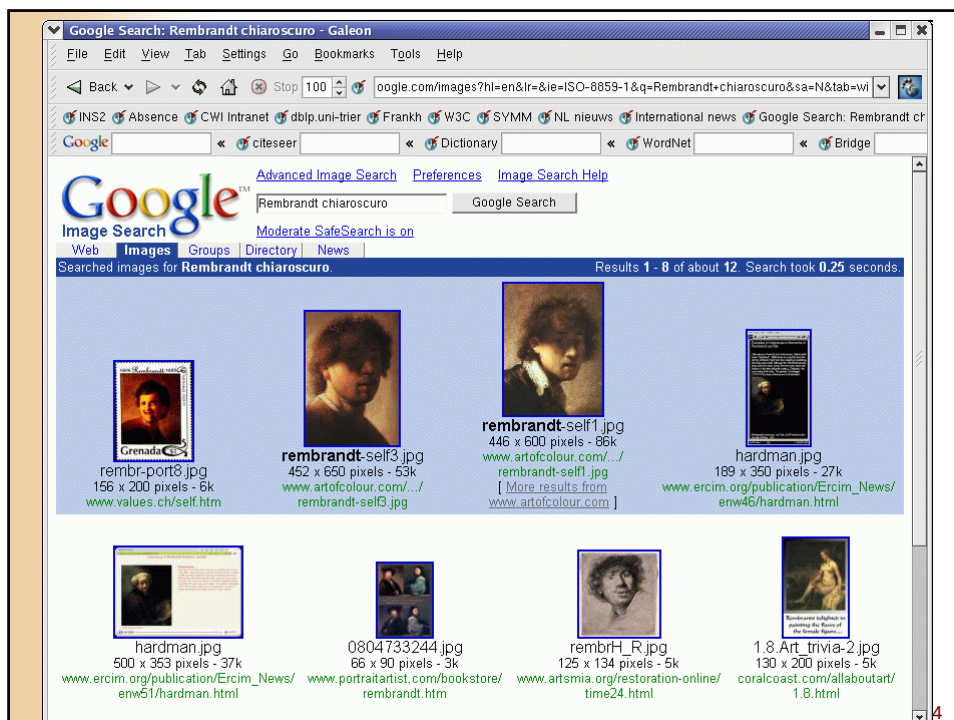
CWI, Multimedia and Human-Computer Interaction
TU/e, Multimedia and Internet Technology

User-tailored Multimedia

- Large amounts of multimedia information stored in databases
- Accessible via the Web
 - Presentation more than a list of URL's
- In the future – part of the Semantic Web
- Application areas
 - Digital libraries
 - Cultural Heritage
 - Online training



3



4

One size *doesn't* fit all



5

The problem

- Too many users need their own information
 - for their level of expertise
 - using appropriate media
 - in an appropriate style
 - displayed on their own device
- Multimedia information design is expensive
- There has to be some automation in the process

6

RealOne Player
gemini.ins.cwi.nl/cocoon/cuypers/aria/selectform-process 1393Kbps 1:29 / 1:35

Chiaroscuro & Rembrandt Harmensz. van Rijn



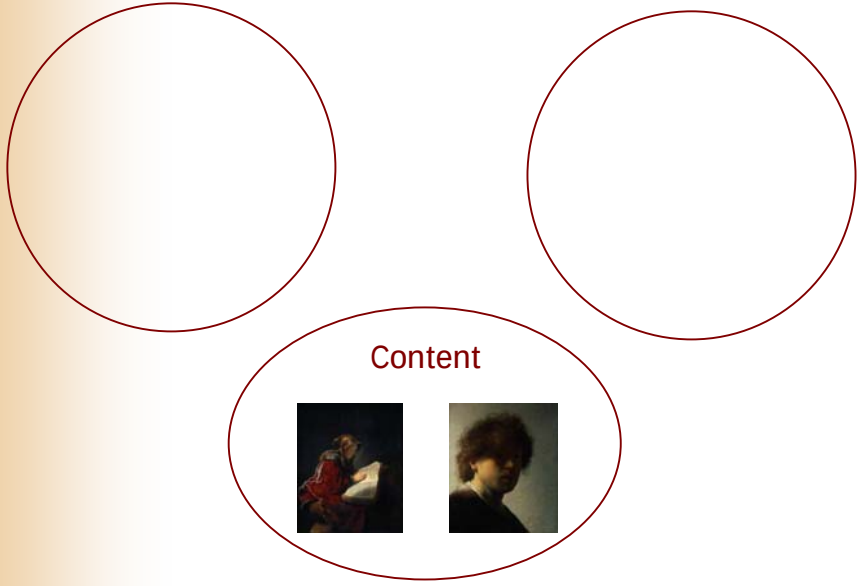
Chiaroscuro
Clair-obscur (French) and chiaroscuro (Italian) both mean 'light-dark'. Both terms are used to describe strong contrast of light and dark shading in paintings, drawings and prints. Although the effect had already been used for many years, the term only came into fashion in the late sixteenth century. Originally, the word came from Italy. The painter Caravaggio (1573-1610) made chiaroscuro his trademark. He was a master at painting illuminated scenes in dark settings.

Demo

Self Portrait (1661)

7

Three ingredients



Content

8

Content of example



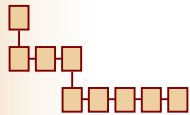
Clair-obscur (Frans) en chiaroscuro (Italiaans) betekenen 'licht-donker'. Beide termen worden gebruikt om sterke licht-donkercontrasten in schilderijen, tekeningen en prenten aan te duiden. Hoewel het effect al eerder werd toegepast, is de term pas sinds het einde van de 16de eeuw in zwang. De oorsprong van het woord ligt in Italië. De schilder Caravaggio (1573-1610) maakte het chiaroscuro-effect tot zijn handelsmerk. Hij was een meester in het schilderen van donkere taferelen met één felle lichtbundel.



9

Three ingredients

Presentation
structure



Content



10

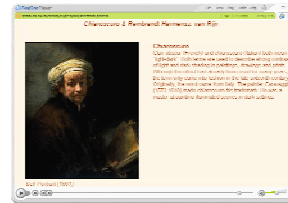
Presentation structure of example

Chiaroscuro & Rembrandt
Harmensz. Van Rijn

title

description

examples



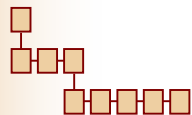
Clair-obscur (Frans) en chiaroscuro (Italiaans) betekenen 'licht-donker'. Beide termen worden gebruikt om sterke licht-donkercontrasten in schilderijen, tekeningen en prenten aan te duiden. Hoewel het effect al eerder werd toegepast, is de term pas sinds het einde van de 16de eeuw in zwang. De oorsprong van het woord ligt in Italië. De schilder Caravaggio (1573-1610) maakte het chiaroscuro-effect tot zijn handelsmerk. Hij was een meester in het schilderen van donkere taferelen met één felle lichtbundel.



11

Three ingredients

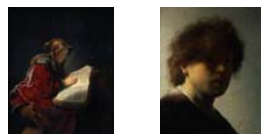
Presentation
structure



Aesthetics

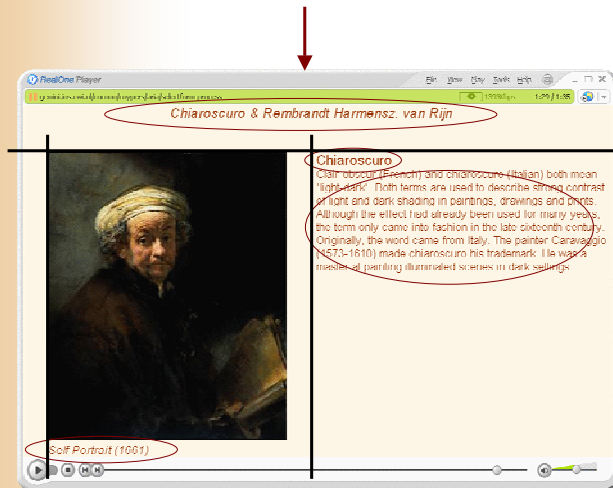
abcdefghijkl
abcdefghijklmn
ABCDEFGHIJK
abcdefghijklm
abcdefghijklm

Content



12

Aesthetics of example



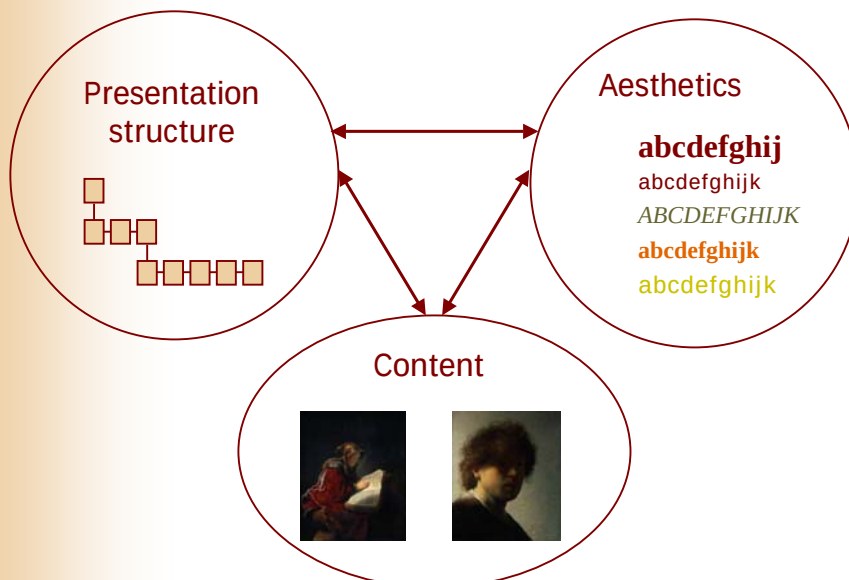
Fonts

Layout

Colours

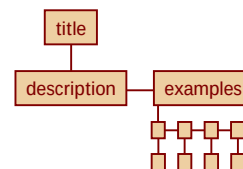
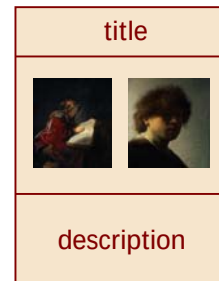
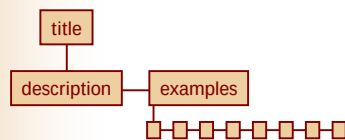
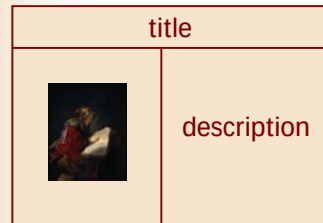
13

Design dependencies



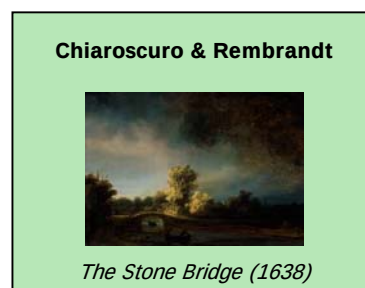
14

Presentation Structure depends on Layout



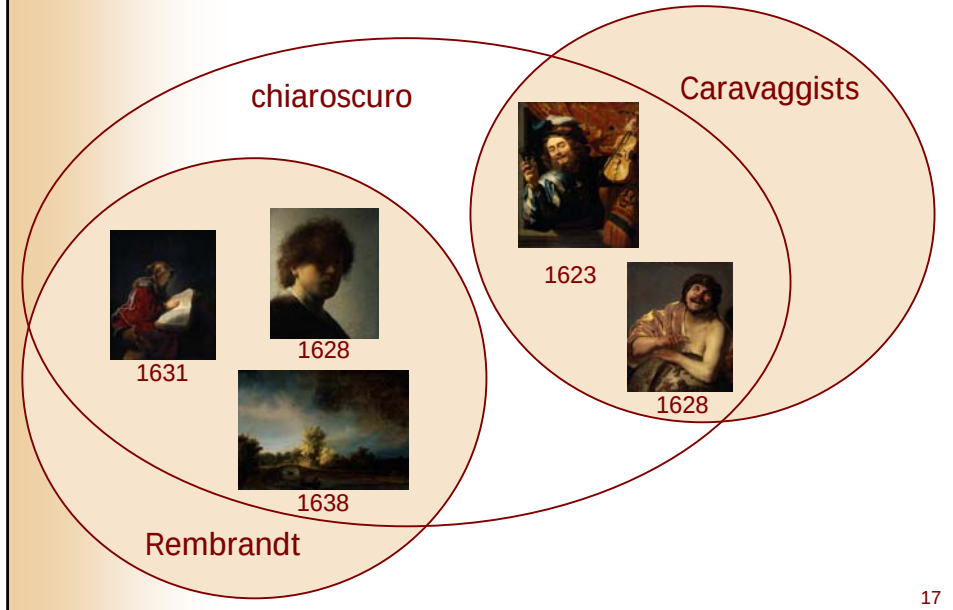
15

Style Depends on Content



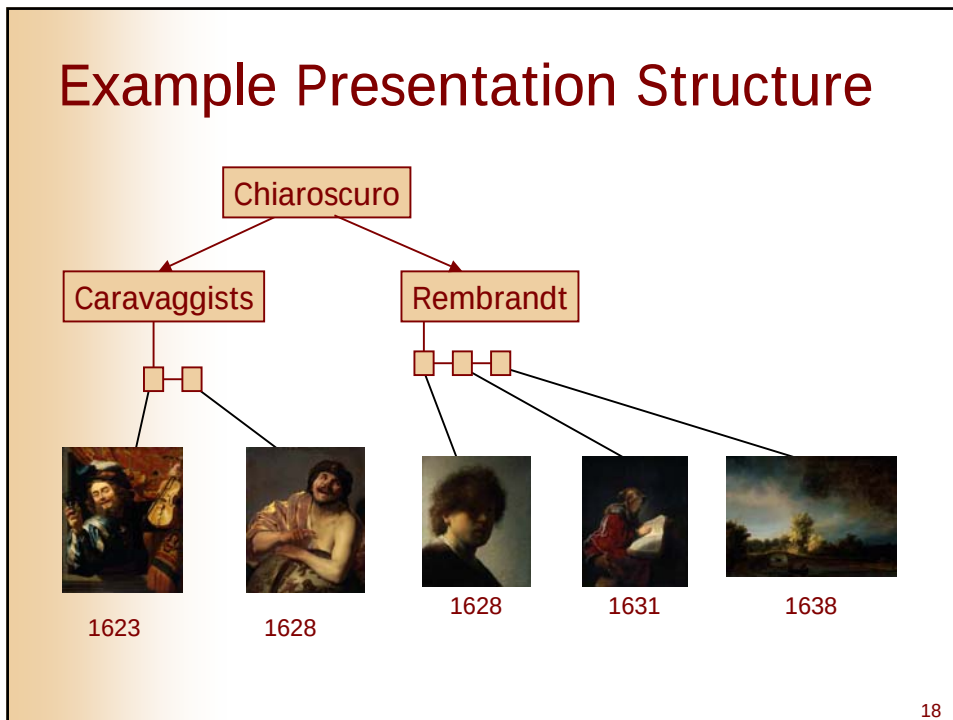
16

Presentation structure depends on content



17

Example Presentation Structure



18

Presentation Player
RIJKS MUSEUM
 a m s t e r d a m

Artists: Johannes Vermeer, Pieter de Hooch

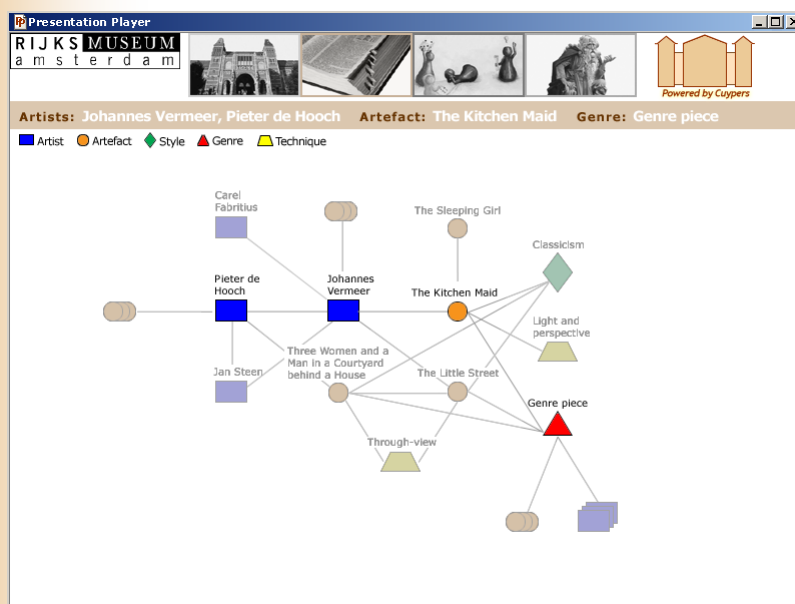
Step 1: choose artist | Step 2: choose artefact | Step 3: choose genre | FINISHED

Please choose the artist(s) you want information about:

A B C D E F G **H** I J K L M N O P Q R S T U V W X Y Z

Haag, Tethart Philipp Christian	Hiller, Joachim
Haarlem, Cornelis Cornelisz. van	Hiroshige, Utagawa
Haaxman, Pieter Alardus	Hisgen & Co., O.
Hack, Marinus Johannes	Hobbema, Meindert
Hainhofer, Philipp	Hodges, Charles Howard
Hals, Dirck	Hogenberg, Frans
Hals, Frans	Hogers, Jacob
Hanneman, Adriaen	Hokusai, Katsushika
Hannké,	Hondecoeter, Melchior d'
Hansen, Carel Lodewijk	Hondius I, Hendrick
Hausdorff,	Honthorst, Gerard van
Heda, Willem Claesz.	Hooch, Pieter de
Heem, Jan Davidsz. de	Hoogstraten, Samuel van
Heemskerck, Maarten van	Horrix, Gebr.
Heemskerck, Willem Jacobsz. van	Horrix, Matthijs
Helst, Bartholomeus van der	Houckgeest, Gerrit
Herselle, Josse van	Houdon, Jean-Antoine
Heyden, Jan van der	Hove, Bartholomeus J.W.M. van
Hillegaert, Pauwels van	Huysum, Jan van

19



20

Rijksmuseum Amsterdam

Artists: Johannes Vermeer, Pieter de Hooch **Artefact:** The Kitchen Maid **Genre:** Genre piece

■ Artist ■ Artefact ◆ Style ▲ Genre ▼ Technique

The Kitchen Maid



ca. 1658, Johannes Vermeer
Oil on canvas, 45,5 x 41 cm

With quiet concentration a woman pours milk into a bowl. With her left hand she supports the can she is pouring from. Around her are various objects: a loaf of bread, a stoneware jug, a basket and a brass bucket. The woman is standing near the window so she can see what she is doing. The light falls on her hands; her silhouette is dark against the white wall. There is a fascinating play of light and shadow in this painting.

▲ **Genre**
This is one of Johannes Vermeer's genre pieces in which he establishes an intensely intimate atmosphere. Although the artist observes his model from nearby, she continues with her work, totally unperturbed.

E Ex J All

▼ **Technique**
Vermeer made use of light and perspective to create the intimate atmosphere. All lines of perspective lead to the right hand of the girl, which subtly accentuates the task of pouring milk in which she is completely engrossed. The horizon lies beneath her head, so that the viewer seems to look up

Johannes Vermeer

Three Women and a Child in a Courtyard behind a House

Classicism

Light and perspective

Street

Genre piece

The screenshot shows a 'Presentation Player' window displaying a museum interface. The header includes the 'RIJKSMUSEUM amsterdam' logo and a row of small images. Below the header, a navigation bar lists 'Artists: Johannes Vermeer, Pieter de Hooch', 'Artefact: The Kitchen Maid', and 'Genre: Genre piece'. A legend identifies icons for Artist (blue square), Artefact (orange circle), Style (green diamond), Genre (red triangle), and Technique (yellow triangle). The main content area features a large image of 'The Kitchen Maid' by Johannes Vermeer. To the right of the image, a text box provides details: 'ca. 1658, Johannes Vermeer, Oil on canvas, 45,5 x 41 cm'. Below this, a list of categories with associated icons and buttons (E, Ex, J, All) is shown: Genre (red triangle), Technique (yellow triangle), Style (green diamond), Johannes Vermeer (blue square), and The Kitchen Maid (orange circle). On the left side of the image, a small network diagram shows 'Johannes Vermeer' connected to 'Three Women and a Child in a Courtyard behind a House'. On the right side, another network diagram shows 'The Kitchen Maid' connected to 'Classicism', 'Light and perspective', 'Street', and 'Genre piece'.

Presentation Player
RIJKS MUSEUM
 a m s t e r d a m

Artists: Johannes Vermeer, Pieter de Hooch Artefact: The Kitchen Maid Genre: Genre piece

■ Artist ■ Artefact ◆ Style ▲ Genre ▼ Technique

The Kitchen Maid ▲ Genre: Genre piece ● Justification

ca. 1658, Johannes Vermeer
 Oil on canvas, 45,5 x 41 cm

Artemisia, ca. 1645, follower of
 Domenico Fiasella, Canvas

Girl

Classicism

Light and perspective

Genre piece

23

Presentation Player
RIJKS MUSEUM
 a m s t e r d a m

Duration: 3 minutes Character: Prosaic

Step 1: choose duration Step 2: choose character Step 3: choose artefact FINISHED

Step 1: How long do you want your story to be? 3 minutes.

Step 2: What is the preferred character of your story?

Prosaic

24

Presentation Player
RIJKS MUSEUM
a m s t e r d a m

Duration: 3 minutes Character: Prosaic Artefact: The Kitchen Maid

Step 1: choose duration Step 2: choose character Step 3: choose artefact FINISHED

2. Search by name of artist:

A B C D E F G H I
J K L M N O P Q R
S T U **V** W X Y Z

Vermeer, Johannes

Artefacts in Rijksmuseum:

"Little Street", ca 1658

The Kitchen Maid, ca 1660

Woman reading a Letter, 1662/1663

The Love Letter, 1669/1670

All other Artefacts in chronological order:

Soldier and a laughing Girl, ca 1658

View of Delft, 1660/1661

The Music Lesson, 1662-1664

Woman holding a Balance, 1669/1670

Young Woman with a Water Pitcher, 1669/1670

25

Presentation Player
RIJKS MUSEUM
a m s t e r d a m

Duration: 3 minutes Character: Prosaic Artefact: The Kitchen Maid

Text: Audio: Speed: 1 2 3

The Kitchen Maid
by Johannes Vermeer
ca 1660
Oil on canvas
45.5 x 41 cm

26



Conclusions

- Creating multimedia presentations requires
 - making design dependencies explicit
 - taking these dependencies into account
- Semantic Web has the potential to
 - encode knowledge we use
 - reuse knowledge already available

This research is supported by

- NWO **I²RP** ToKeN2000
Intelligent Information Retrieval and Presentation
- NWO **CHIME** ToKeN2000
Cultural Heritage in an Interactive Multimedia Environment
- NWO **NASH**
Networked Adaptive Structured Hypermedia
- Telematica Instituut **Topia**
- Images courtesy of **Rijksmuseum**, Amsterdam

29