

# ConservationSpace

A Digital Approach to Conservation Documentation

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Mervin Richard  
National Gallery of Art, Washington DC  
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# Introduction

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- The National Gallery of Art
- Conservation documentation
- Origins of ConservationSpace
- Fundamental concepts
- Building the software



# National Gallery of Art

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West Building - 1941



John Russell Pope  
(1874–1937)

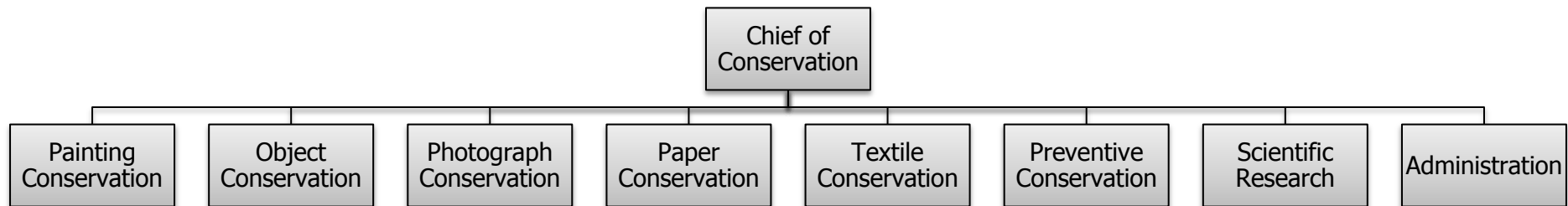
East Building - 1978



I. M. Pei  
(b. 1917)

# National Gallery of Art

## Conservation





# ConservationSpace

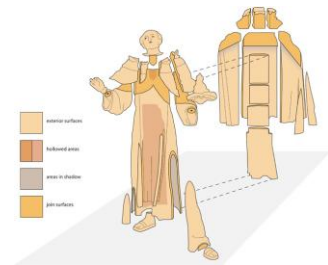
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“The conservation professional has an obligation to produce and maintain accurate, complete, and permanent records of examination, sampling, scientific investigation, and treatment. When appropriate, the records should be both written and pictorial.”

In: Guidelines for Practice - The American Institute for Conservation of Historic and Artistic Works

# Conservation Documents

- Reports
  - Examination
  - Treatment
  - Scientific analysis
  - Surveys
- Photographs
- Correspondence
- Notes
- Digital assets



# Conservation Documents



# Conservation Documents

Maybe it looks more like this?





# Digital Assets

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Oh My! Where are my digital assets?



# ConservationSpace

## Origins

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- Andrew W. Mellon Foundation
- Directors, curators, conservators, and scientists
- Current state of conservation documentation
- Two meetings
  - Metropolitan Museum of Art, April 2006
  - British Museum, May 2007

# Community Design Workshops



64 professional  
49 institutions  
US, EU, AU

# Wish List



You will need it!

# Design Phase Wish List

Raise your hand if you can read the list!

1. Easy entry data for individual items and multiples as archive collections
2. Ability to create 'sub-records' for objects pairs or parts of objects that share one accession number.
3. Very easy associated file attachment with automated, voice-enabled metadata generation
4. Easy, rapid data entry for very minor or duplicate treatments
5. Flexibility of formats for object records
6. Allow for idiosyncratic approaches
7. Fun to use
8. Intuitive, simple system with tutorial and training
9. A system that prompts our profession to keep evaluating 'why'
10. Free with free support
11. Quantifying state of preservation
12. Cloud-based, shared, trusted storage for (e.g.) images, data
13. Include HXS prompts and checklists/risk assessments
14. Include condition assessments/treatment assessments with estimated time
15. Data entry & image uploads –multiple methods
16. Means of turning marked images into numbers
17. Image editor for marking photos
18. Annotated images and data
19. Images of objects with links to text and data files
20. Image based database--the objects are the best teachers
21. Image based searching—exploring a predominantly visual domain via images
22. New technology for condition checking—software will accept audio, touch screen,
23. Sharing image collections/resources
24. Digital images for 'maps'-(damage, treatment, samples etc.)
25. Use digital images to draw e.g.. Damage on comp. Screen
26. Ability to store and view image files in high resolution, zoomability
27. Easy image uploading
28. Image-based vs. text/written document-based
29. Image mark-up layers which are separate but related to image file
30. DiGIR-type information sharing (3D)
31. Annotate-able images
32. Access to conservation images through database
33. Easy to create reports
34. Report 'draft' tool with wiki functionality for collaboratively generated documents
35. Possible to print out hard copies of treatment records
36. A way to handle reports in bulk say what you want to say 'ok' to moving 500 objects
37. Treatment/condition reports with tags to generate new connections (semantically tagged)
38. Auto report summary for abstracts, etc.
39. NOT Crystal Reports
40. Toggle between reports easily
41. Flexible creation of report templates
42. Lists of images of single object
43. Lists of reports on objects
44. Smart search
45. Easy searching/indexing systems
46. Ability to store and search scientific data
47. Search by: media, technique, procedure, analytical results, attached media
48. Data mining tool
49. Ability to call up ALL record for 1 object
50. Searchable paint x-sections database by different criteria: artists, color, pigments, etc.
51. Free text searches
52. Search on multiple fields
53. Searchable image content
54. Web feeding
55. Web browser database
56. Remote access
57. Sharing across different institutions
58. Sharing across departments within museums
59. One point of entry allowing access to lots of different types of information
60. Open access for all—conservators, curators, scientists, other museum professionals, general public
61. Share our data with everyone in the world
62. Shared locations for capture/dissemination of knowledge
63. ROBOTS! (non-evil)
64. Make it possible to create 'packages'/groups of records/objects
65. Possibility to reach back to the people who searched our database
66. Mixed procedure-narrative and data entry for occasional users
67. Reference-able narrative chunks (stories)
68. Reduction of time spent in documentation!
69. Save time for documentation and search
70. Small treatment shortcut document
71. Secretary, octopus, automated analysis
72. Communication pattern templates with template edit/archive
73. Certified digital repository for conservation documentation
74. Best practices protocols for documentation
75. Standardize documentation methods in training programs
76. Import/export
77. A sustainable system and data export
78. "Sell by date" or "best before..." (additional note "for materials?")
79. Support access to information required
80. Flexibility to modify
81. Multi language
82. National language (possibility to create an interface in local languages)
83. Cameo in multiple languages
84. Support for non-European, non left-to-right character sets
85. Customizable pick lists for materials—techniques and damages that reoccur often
86. Conservation materials lists with international alternatives
87. Standard thesauri for conservation
88. Standard thesauri for object materials and conservation materials with synonymy resolution for preferred terms + foreign language terms
89. Terminology: illustrated
90. Seamless edit/presentation
91. An auditing system to ensure that material is not corrupted or altered at a later date
92. Electronic signatures
93. Accountability
94. Share information in a cascade from peers to wide public
95. Different levels of access—engage the public/legislators. Children are the future, engage them as early as possible
96. Bibliographies/art historical/scientific/technical and treatment
97. Linked to selected case studies—paintings (any object) see in different ways front, back, different light and exam techniques
98. Keep it simple! And do it soon! User-friendly
99. Something simple
100. Cons.pedia for learning
101. Possibility for storing comp topographic movies
102. Ability to plug in additional modules/techniques
103. Automated abstract possibilities
104. Processes of exam and co explained—what in uvf how does it work?/ what does it tell us etc.
105. Very complex database, very simple user interface
106. Intuitive interface

# Development Partnership

2010 – Present

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- National Gallery of Art – Lead
- Courtauld Institute of Art
- Denver Art Museum
- Indianapolis Museum of Art
- Metropolitan Museum of Art
  - Withdrew in late 2015
- Statens Museum for Kunst
- Yale University

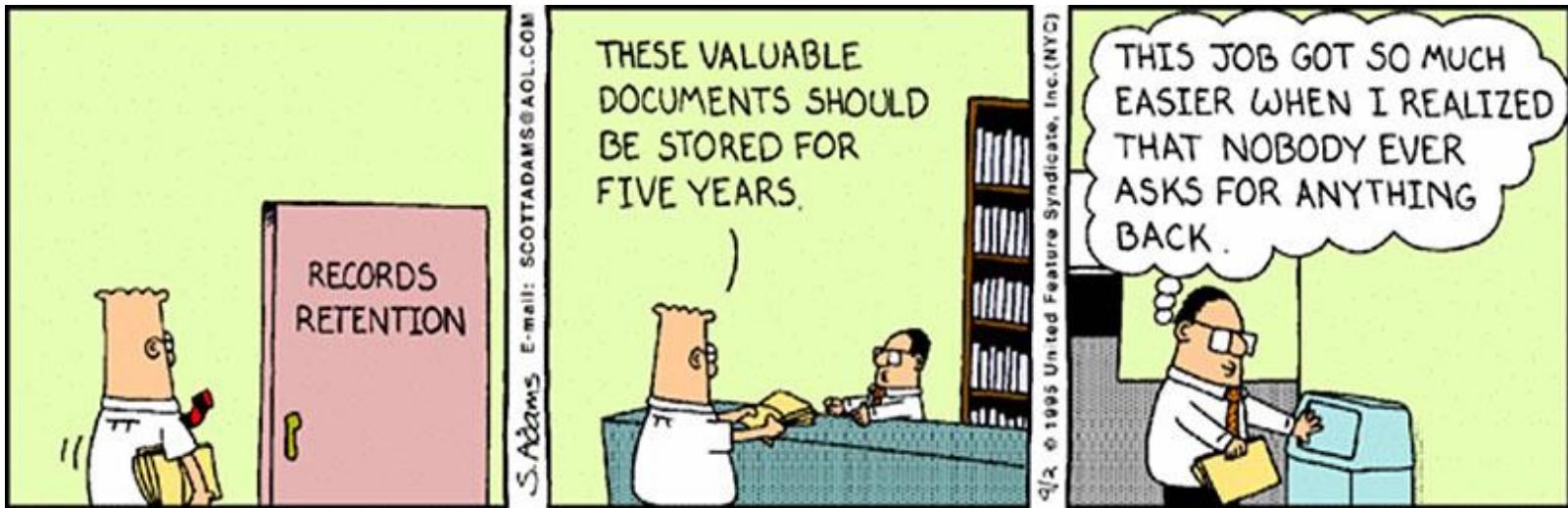


# Fundamental Concepts

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- Institution and private practice
- Simplify workflow processes
  - Less work – Not more
  - High-quality search engine
  - Document preservation
  - Collaboration

# Documentation Preservation







# Fundamental Concepts

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- Configurable
  - Individual working styles
  - Institutional policies and procedures
- Open source
- Web based



# Fundamental Concepts

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- Enterprise integration
  - Collection Management Systems
  - Digital Asset Management Systems
  - E-mail (partial integration)
- Data security
- Legacy documents

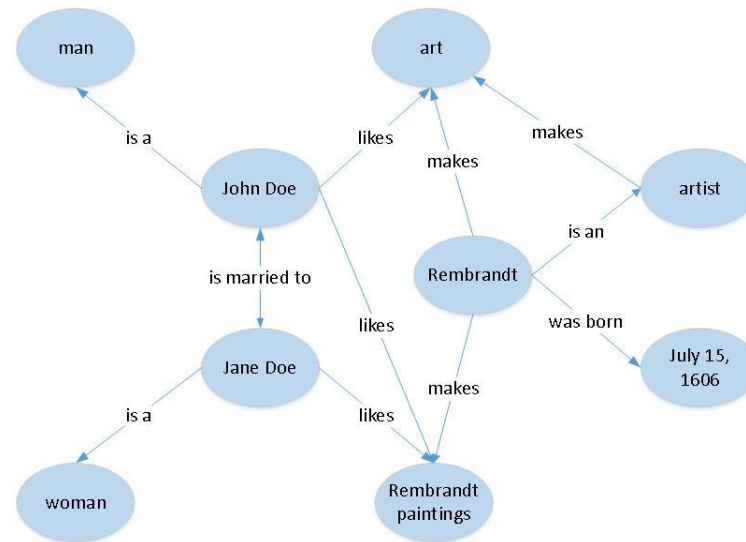


# Fundamental Concepts

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- Imaging tools
  - High resolution
  - Panable
  - Zoomable
  - Image annotation
  - Basic editing tools
- ConservationSpace uses Mirador

# Semantic Database



- Improve
  - Discoverability
  - Access diverse databases



# Software Development

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- Sirma Enterprise Systems
  - Offices Sofia, Bulgaria and New York
  - Sirma's Enterprise Management Platform
    - Alfresco platform
- Language options
  - Develop Bulgarian language version first
  - Translated into English
  - Statens Museum for Kunst instance in Danish



# Hosted Environment

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- Software as a service (SaaS)
- Minimize installation costs
- Ensures version-control
- Simplifies software maintenance
- Centralized technical support
- Multitenancy
  - Single instance of software
  - Serves multiple clients



# Enterprise Environment

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- Institutional servers
- Higher installation cost?
- Version-control concerns
- Requires institutional IT staff



# Software Maintenance Fees

## (Approximate)

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<b>System Size</b>	<b>Annual Fee</b>	<b>Implementation Fee *</b>	<b>Max Users</b>	<b>Storage (Included)</b>	<b>Storage (Additional TB per Year)</b>
Very Large	\$20,000	\$5,000	50+	1 TB	\$480
Large	\$18,000	\$4,000	40	500 GB	\$480
Medium	\$14,000	\$3,000	30	300 GB	\$480
Small	\$11,000	\$2,000	20	200 GB	\$480
Very Small	\$6,000	\$1,000	10	100 GB	\$480
Individual **	\$360		1	50 GB	\$480

\* Does not include enterprise data integration or language customization

\*\* Reduced functionality





# Project Status

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- Used by National Gallery of Art
- Installed at Courtauld Institute of Art
- Installation nearly complete at Statens Museum for Kunst
- Installation begun at Yale Art Gallery
- Installation begun at one Yale Library

# Mobile Devices

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- Now – use web browser
- Will build mobile application



@ConservationSpace



# Website

The screenshot displays the ConservationSpace website interface. At the top, there is a navigation menu with links for HOME, OVERVIEW, MAJOR FUNCTIONS, FAQ'S, MIRADOR IMAGING, HISTORY, RELEASE NOTES, and BLOG. Below the menu is the ConservationSpace logo. The main content area shows a user dashboard for John Jones, Conservation Administrator. The dashboard includes sections for Recent Documents (154 results), Recent Cultural Objects (58 results), System Help, Saved Searches (5 results), and Folders (33 results). The Recent Documents section lists several examination reports and condition reports. The Recent Cultural Objects section lists several TMS Paintings and a Desso Dossier. The System Help section provides links to help and support. The Saved Searches section lists various search filters. The Folders section lists various folders and their contents. The bottom of the screenshot shows the Windows taskbar with various application icons and the system tray showing the date and time as 5:33 PM 3/16/2018.

ConservationSpace is a web-based digital document management system developed specifically for conservators. It allows users to write, store and retrieve conservation information.

<http://www.conservationsspace.org>

# Thank You for Listening



Rogier van der Weyden  
Portrait of a Lady  
Netherlandish, c. 1460  
Oil on panel  
1937.1.44