



Web-based document-centric collaboration software from BPOMS

## Redaction in eReview



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## TABLE OF CONTENTS

<b>1</b>	<b>REDACTION IN EREVIEW .....</b>	<b>3</b>
<b>2</b>	<b>HIGHLIGHTS OF THE EREVIEW REDACTION PROCESS.....</b>	<b>4</b>
<b>3</b>	<b>MODES OF REDACTION.....</b>	<b>4</b>
3.1	SELECTIVE REDACTION: APPLYING PAGE-LEVEL SECURITY .....	5
3.2	CONTENT REDACTION .....	10
<b>4</b>	<b>MANAGING REDACTION IN INTEGRATIONS.....</b>	<b>11</b>
<b>5</b>	<b>DOCUMENT DISTRIBUTION AND RELEASE .....</b>	<b>11</b>
<b>6</b>	<b>BENEFITS OF REDACTED VIEWING .....</b>	<b>12</b>

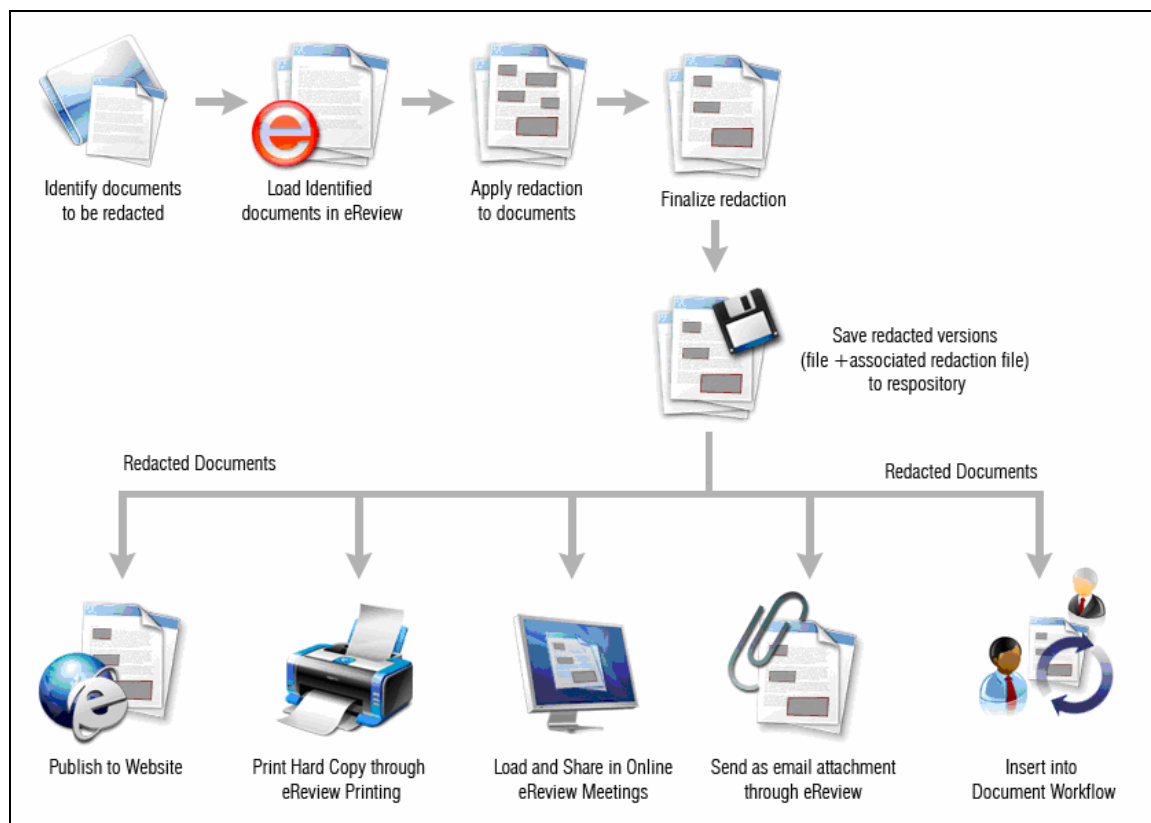
## 1 Redaction in eReview

Traditional paper-based systems used a simple but laborious way of manually omitting classified and sensitive segments from documents by an eraser or black marker. Technological evolution induced the adoption of electronic filing processes and reliance on emails and other Web-based means of document routing and sharing. This paradigm shift greatly eliminated time and cost constraints that were associated with manual labor-intensive processes. But although this removed communication bottlenecks, it was widely recognized that electronic document propagation methods can expose the documents to potential data security risks and data privacy issues unless proper tools and methods to preserve the sanctity of confidential information are devised and incorporated in the process. Across all industry verticals, document management and review procedures are driven by numerous compliance mandates and legislation guidelines which demand authorized and restricted access to critical and sensitive information that often forms an integral portion of the document(s) under review. Non-compliance and its ramifications inevitably result in huge financial losses and legal struggles. Consequently today's enterprises are continuously striving to develop effective means to streamline processes to meet these regulatory obligations competently. To meet compliance demands, in-process documents and files need to conform to stringent access protection rules at every stage of the document lifecycle and it is imperative for organizations to follow clear auditable processes to protect sensitive and private information before public disclosure. An effective and intuitive redaction mechanism forms an indispensable part of the document workflow ensuring that all proprietary information remains protected from unauthorized access and sensitive portions of released documents are censored before public distribution.

eReview **View, Markup** and **Conferencing** tool enables organizations to View, Annotate and Print over 200 formats stored across the enterprise from a single browser interface. Moreover, being a collaborative viewer, it extends to support a full-blown meeting-enabled platform that supports real-time document-centric online live meetings as well as sequential and parallel asynchronous document review sessions. Needless to say, eReview recurrently deals with critical documents, in viewing sessions or in online meetings involving users from all levels and from dispersed locations. Hence, not only does it need to guarantee complete sanctity of the documents under review, but also needs to facilitate reliable and restricted access to the critical and sensitive information in these documents. To insure content-security, eReview provides for **Redacted Viewing** where certain users/groups can be restricted from viewing selected portions of confidential documents. The redaction layer is burnt into the document at the server-side, and the document is streamed back to the client, thus leaving no scope of disassociation of the redaction layer from the base document. The sensitive data remains completely protected because the redaction layer cannot be unloaded by a regular user at any point. The entire streamlined document review-redact-print cycle through eReview thus allows paperless digital sharing, review, markup, redaction and approval of documents while keeping the organization's digital IP private and secure.

## 2 Highlights of the eReview Redaction Process

- Redaction file is a **separate layer** on top of the base document and does not edit or modify the base document
- When integrated to a DMS, redaction files are stored back to in the DMS repository and **remain associated with the original or base file**
- Documents with **redaction layers burnt-in** can be saved as JPG or PDF files and published or distributed. These images can be printed, shared in online meeting sessions, printed as hard copies, sent as email attachment or inserted into a document workflow



**Redaction Process in eReview**

## 3 Modes of Redaction

Redaction in eReview can be of the following types:

- **Selective Page Redaction: Applying Page-level Security**
- **Content Redaction**

### 3.1 Selective Page Redaction: Applying Page-level Security

Selective Page Redaction allows an eReview administrator or super-user to restrict certain pages from being displayed to regular users. Typically a super user logs in to eReview and restricts certain pages of a given document using Page Redaction Mechanism. After this redaction is finalized by the user, the redaction layer gets associated with the document. Next, when the document is loaded by other users or in a multi-user meeting scenario those pages which had been restricted by the super user are displayed as redacted. Here is a simple step-by-step depiction of a typical Selective Page Redaction process in eReview

The case involves three users

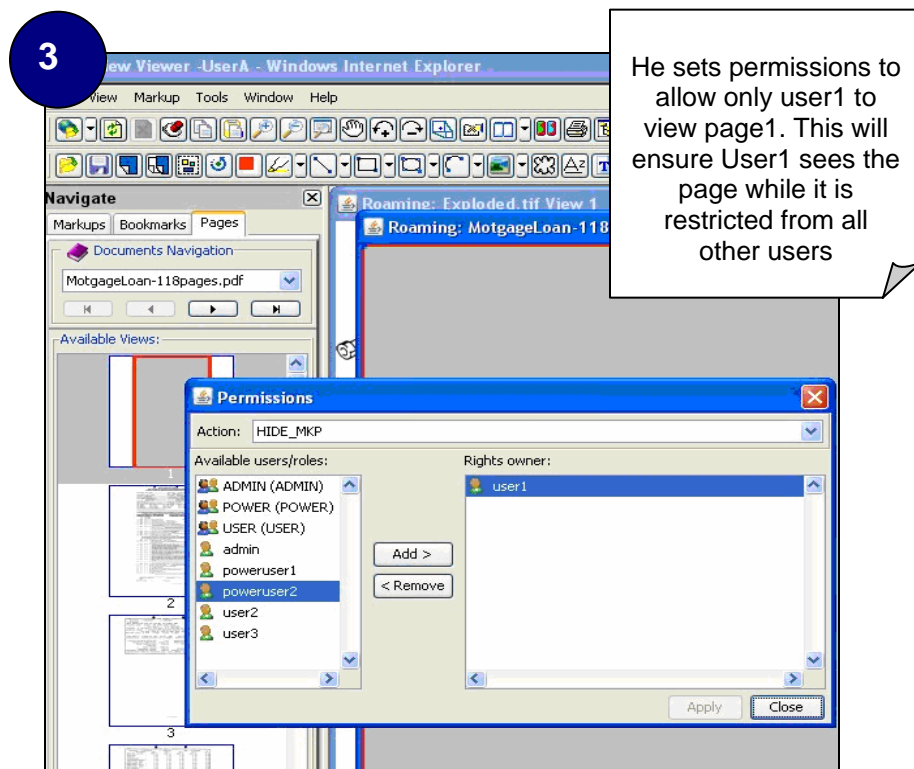
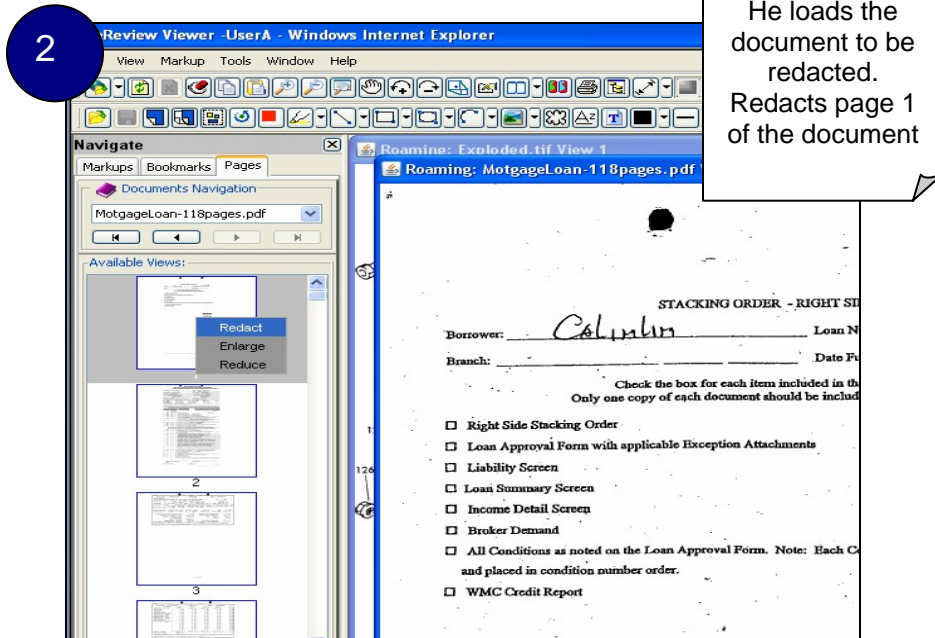
1. Power User “poweruser1” has the privilege to set selective access restrictions on documents
2. Simple User “User1”
3. Simple User “User2”

1

The screenshot shows the eReview Viewer Applet interface. At the top, there's a header with the eReview logo and the text 'Document Collaboration Technology from BPO Management Services'. Below the header, there's a section labeled 'eReview Viewer Applet'. Under this, there's a field for 'Attendee Name:' with the value 'poweruser1' entered. Below this is a table with four rows of document samples. Each row has a 'Document Title', a 'Type' icon, and two buttons: 'View' and 'View-Annotate'.

Document Title	Type	View	View-Annotate
AUTOCAD Sample		View	View-Annotate
PDF Sample		View	View-Annotate
XLS Sample		View	View-Annotate
TIFF Sample		View	View-Annotate

Power User  
“poweruser1”  
logs in to  
eReview





4

He redacts page 2 of the same document

WMC MORTGAGE CORP  
NOTICE OF CONDITIONAL LOAN APPROVAL AND UNDERWRITER REQUIRE  
\*\* Subject to verification and validation of all information provided by Broker

Date: 07/18/2003 Loan #: 10529488 Program #: 6481P Credit Grade: J  
Account Executive: CAMPAT, ANTHONY Broker: 22118 CFS FINANCIAL  
Loan Analyst: BILANDER, BRIAN Broker Contact: VIRGIL FLORES  
Tel #: 510-487-1791 Fax #: 510-487-1791  
Borrower: CATALINAC, CALIMILM Co-Borrower: NAPOLEON, C. CALIMILM  
Borrower Address: 389 CORAL RIDGE DRIVE Property Address: 389 CORAL RIDGE  
PACIFICA, CA 94064 PACIFICA, CA 94064  
Property Type: J-FAMILY Occupancy Type: Owner-Occupied  
Loan Type: Purchase Doc Type: FULL  
Loan Amount: 112,400.00 Purchase Price: 562,000.00 Appraised Value: 562,000.00  
LTV: 20.00 % CLTV: 100.00 % D/R: 28.83 / 48.00 % Cash Out: N  
Rate: 8.7500 % Margin: 0.0000 % Caps: 0.0000 % Index: 0.0000 %  
Term: 180 / 360 Discount: 0.0000 % Rebate: 0.0000 % Prepay: 3.00 %  
Reasons for Differences Between Submitted and Approved Program:

All conditions must be received 72 hours prior to closing. Credit Documents May Not Exp

Approval Expires 06/26/2003 Appraisal Expires

Prior	To	By	Waived	
PTC	UW	A		1. Receipt of Original Loan File
PTC	CL	A		2. X Signed Broker Demand X Broker Approval
PTC	CL	A		3. X Original Handwritten 1003 X Corrected Typed 1003
PTC	CL	A		4. Copies of all executed Federal & State Broker Disclosures
PTC	UW	A		5. Last 12 Months Mortgage History/VOR from: CASC, CHECKS ONLY *NO VOR FROM RELATIVE (12 months canceled checks if lease option)
PTC	UW	A		6. W2's for and Tax Returns for and Current Paystubs (1 VOR) 2 9501 (CA) VOED NAPOLEON & AIMEE LESS THAN 1
PTC	UW	A		7. One (1) source of Satisfactory Evidence of 2 year history of Self-Employment
PTC	UW	A		8. Verification of funds to close: 2 MOB DTI: COSTS REASONED 60
PTC	CL	A		9. Satisfactory Homeowners Insurance Policy \$ 130000.00
PTC	UW	A		10. Satisfactory Title Survey X Pest Well Cert. Septic (Taxes must be d
PTC	CL	A		11. Estimated HUD-1 with all payoffs and demands.

5

He sets permissions to allow only user2 to view page 2. This will ensure that he sees the page while it is restricted from all other users.

Permissions

Action: HIDE\_MKP

Available users/roles:

- ADMIN (ADMIN)
- POWER (POWER)
- USER (USER)
- admin
- poweruser1
- poweruser2
- user1
- user3

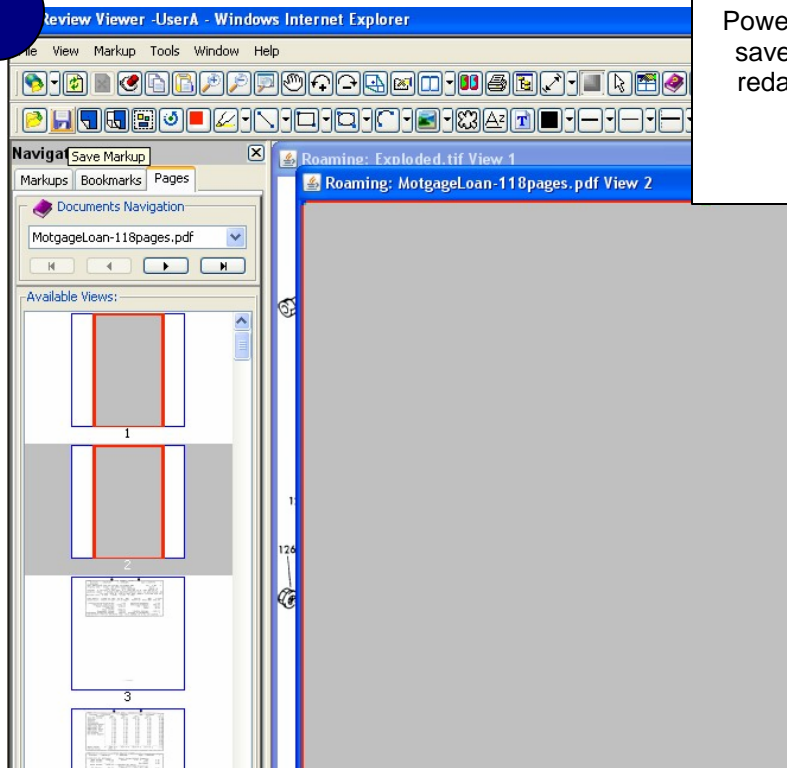
Rights owner:

- user2

Add > < Remove

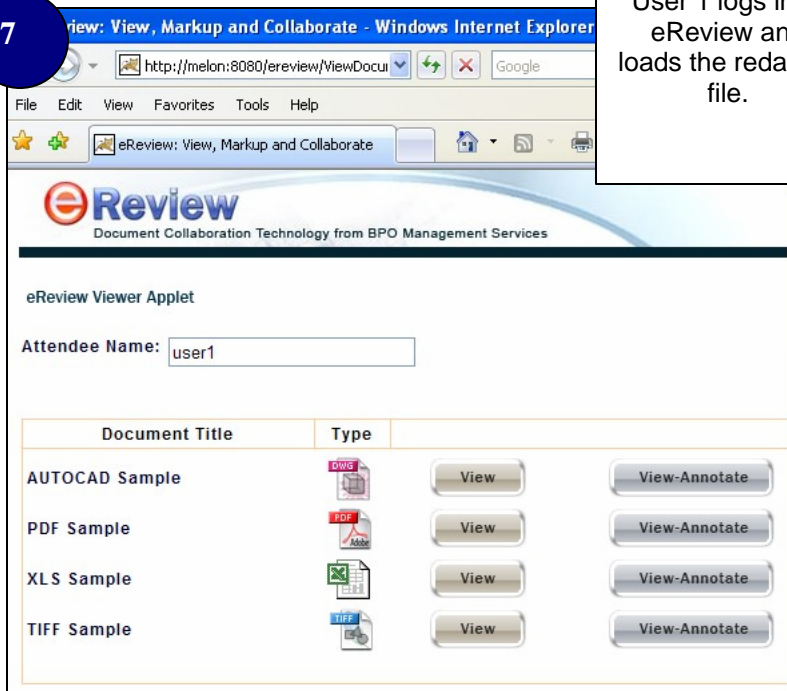
Apply Close

6



Power User  
saves the  
redaction

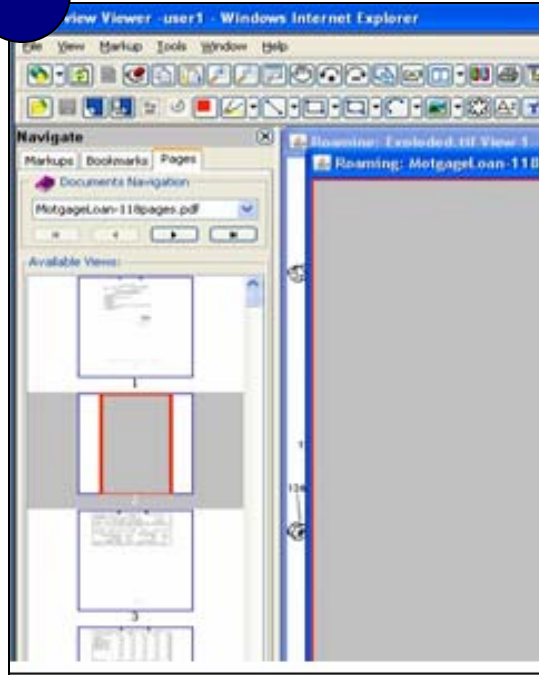
7



User 1 logs in to  
eReview and  
loads the redacted  
file.

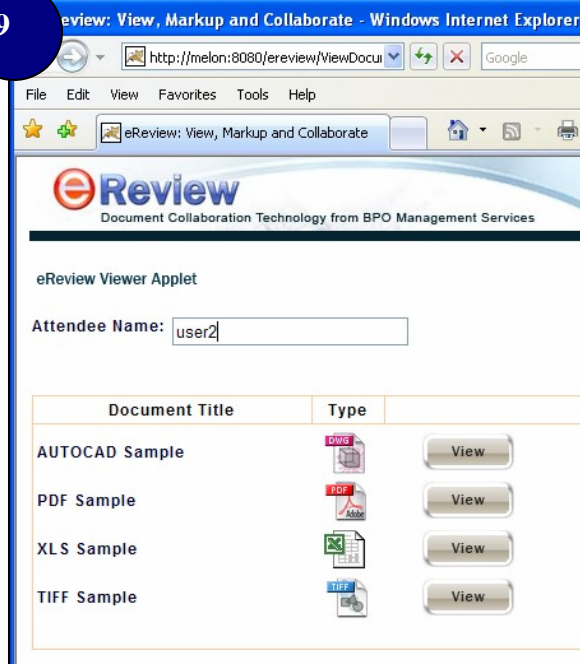


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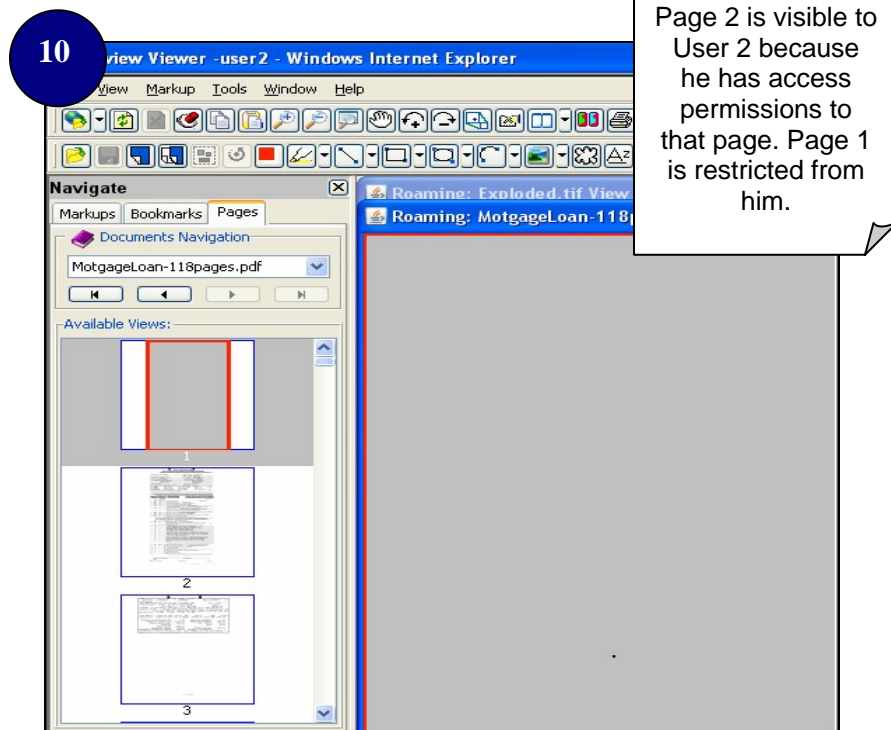


Page 1 is visible to User 1 because he has access permissions to that page. Page 2 is restricted from him

9

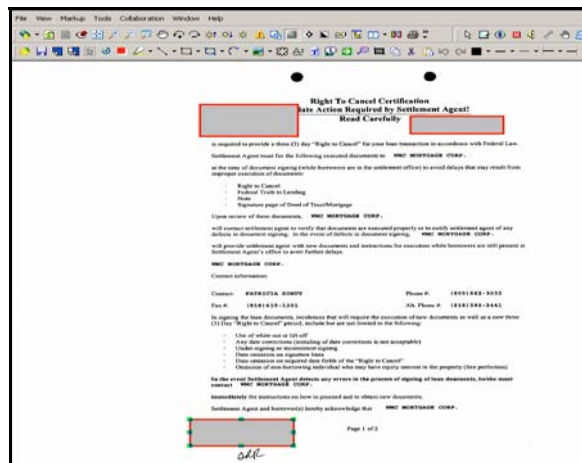


User2 logs in to eReview and loads the redacted file



## 3.2 Content Redaction

Content Redaction allows an eReview administrator or super-user to restrict selected in sections of a document from being displayed. Portions (e.g. Sensitive information like Social Security No., Policy No., Bank Account No. etc. or irrelevant or redundant matter) of a given document can be redacted using the eReview Redact tool. The document can be later viewed in eReview viewing session along with the redaction layer associated, i.e. those sections hidden. The document can be shared in online meetings or its image or PDF rendition can be sent as email attachment or attached to a workflow along with the redaction layer burnt-in.



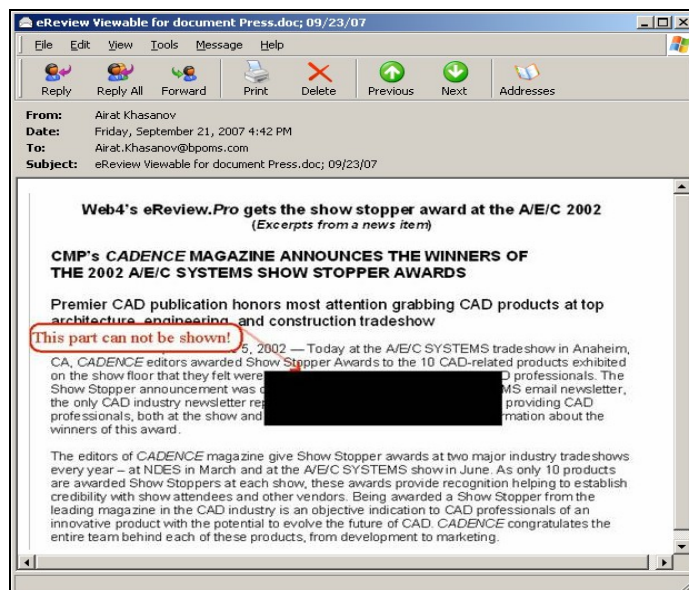
Content Redaction

## 4 Managing Redaction in Integrations

Being highly flexible and interoperable, eReview supports out-of-the box integrations with a number of other ECM/PLM/CRM /PDM solutions. It is seamlessly integrated with solutions like FileNet, Documentum, Alfresco etc. and supports view, markup, redaction and printing of documents directly out of the content repositories of these systems. When integrated to a DMS, eReview is configured to use the authentication of the DMS and seamlessly inherits the ACL of the DMS. Depending on the user roles, the privilege to apply and manage redactions can be granted to selected users or groups. Typically, from the ECM document vault, a user with sufficient redaction rights will be able to load the document to be redacted, apply and finalize the redaction and save the document back to the repository. The redaction files are saved back to the DMS repository, along with date, timestamps and author name as audit trails. The redaction files are cross-referenced to the base document. Redaction does not modify the base document, but is configured to remain associated with the base document at all stages its lifecycle in such a way that it can never be loaded or viewed without the redaction layer.

## 5 Document Distribution and Release

The redaction layer is a separate layer on top of the base document and cannot be unloaded by simple users at any point. In a real-time online meeting scenario, redaction layers are configured to be auto-loaded along with the document, thus leaving no scope for revelation of the restricted pages (in case of page level redaction) or content (in case of content redaction) behind the redaction layer. When printed in eReview, the redaction layer gets printed along with the document automatically. Hence, once redacted, the documents can be safely released for distribution because although redaction files are corollary files, they are configured to remain inseparably fused to the base document. In viewing and meeting sessions the files are documents are loaded along with the redaction layer and moreover, for publishing the redacted documents, attaching them to a workflow or for sending as email attachment, eReview provides the option to convert the document to JPG or PDF format along with the burnt-in redaction layer.



Send redacted file as email attachment

## **6 Benefits of Redacted Viewing**

- Enables effective but secure document collaboration. Online meetings let you share documents but you have the option to impose restrictions on pages that cannot be shared.
- Eliminates information leakage while keeping the collaboration channel intact. Review processes involving critical documents continue smoothly and securely across entities internal and external to the organization as classified sections can easily be kept redacted throughout the workflow. There is no provision of revelation of the concealed content/pages of the documents in review.
- Streamlines the process of distribution of documents to meet compliance obligations. Selected sections can be redacted before a document is released for distribution.
- Eliminates non-compliance penalty risks and costs as it ensures complete data protection and reliable information access.
- Helps remove irrelevant and redundant information from documents before they are shared in review sessions. This helps avoid costly errors and reduces ambiguity in decision making.
- Augments the entire review-redact-print-publish workflow and optimizes operational efficiency.