

# Seamless Flow Newsletter

## Seamless Flow—managing the lifecycle of electronic records

September 2007

Issue 1

## Seamless Flow—It's becoming real

Welcome to Issue 1 of the Seamless Flow newsletter from The National Archives.

Through this newsletter, we aim to keep you informed of developments and progress in the Seamless Flow Programme. It's intended for anyone with an interest in Seamless Flow — Record Managers, DROs, IT professionals, and indeed anyone who creates and stores electronic information.

Please pass it on within your organisation, and let me know of anyone to be included on the distribution list. I'd be delighted to receive your feedback on the newsletter, and what topics you'd like covered in future issues — we plan to publish 3 times a year.

In this first issue, we provide a very brief overview of the Seamless

Flow Programme—what it is, what it covers, why we need it. We also describe what we have done to date, what successes we've had, and what we have still to do.

This is a hugely busy period in the lead up to Seamless Flow moving from a programme to business as usual in April 2008. We are completing user acceptance testing, and two of our projects (Technology Watch and Preservation and Maintenance) have recently been Gateway reviewed in readiness for going live. We've issued a set of FAQs with a 'Dear DRO' letter and the team is actively planning the most useful presentations to the October Conference and for an Open Day we are planning in late November. We would not be so well advanced without all the participation

of colleagues from across government (programme and project boards, evaluation teams, pilots, questionnaire responses and more), so thank you.



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### Why do we need Seamless Flow?

- Increasing use of electronic records
- Increase in volume of records
- Need for automated processes
- Preservation of electronic records
- Technology Obsolescence
- Vulnerable to corruption and loss

# What is Seamless Flow?



The Seamless Flow Programme is intended as far as possible to ensure a secure, managed, seamless, automated flow of

electronic records from creation in government departments through to their eventual preservation at The National Archives and delivery to the public over the Internet.

To manage the work we have set up 6 individual projects addressing the main physical processes:

- Appraisal and Selection
- Metadata & Cataloguing
- Transfer to TNA
- Preservation & Maintenance

- Technology Watch
- Delivery and Presentation

And 2 projects that sit across the whole lifecycle:

- Management and Security
- Business Change and Training

## Achievements and Successes

Seamless Flow has been running as a programme for just over 2 years. We have achieved a great deal during this time although it has taken some time before there is something tangible to see.

“The new approach actively targets records identified as worthy of permanent preservation.”

**E-appraisal** - We have introduced new appraisal and selection procedures and started a full-scale training programme for Departments.

Over 120 staff from approximately 40 departments have been trained so far and a further 100 staff from a further 24 departments are enrolled on the 2007-8 training programme. The new approach actively targets records identified as worthy of permanent preservation.

**Software contracts**— We have let 2 major software contracts. Our contractors are developing a new workflow application – the transfer

system — and further software to help us manage preservation and maintenance issues.

**E-Cataloguing and Metadata**— We’ve designed a new system for referencing electronic records. It was a huge undertaking to create a reference system whose references can be allocated automatically, which can cater for any and every type of born digital record, and which can transfer from system to system - that is from a government department’s Electronic Records Management System (ERMS) to the storage system for electronic records in TNA by XML export.

**Transfer** – We have received and tested 3 iterations of the Transfer system, a web-based tool that enables package and transfer of electronic records. Iteration 3 was the final part of the pilot process, running an end to end pilot from transferring the accession from a Department to placing the records into TNA’s Digital Object Store.

With substantial assistance from TNA’s IT department we have designed and installed a separate secure network for Seamless Flow

and have obtained the necessary security accreditation for this to be connected to the GSI environment.

**Digital Object Store**—We have installed the new Digital Object Store which will be integrated with the transfer system. We also have the first stage of our active preservation in the form of an enhanced file type recognition utility.

**Delivery and Presentation**— We have released Version 2 of our web-based delivery and presentation system—Electronic Records Online. We have a parallel version available through our GSI network which will be used by government departments to provide secure access to transferred closed records.



<http://www.nationalarchives.gov.uk/ero/>

# Business Change, Communications and Training

Seamless Flow is not just a collection of software solutions. Successful implementation and use of the new software solutions is linked with introducing new business processes to support managing electronic records. The Seamless Flow Business Change project is tasked with introducing the new processes both within TNA and to government departments. We have drafted the new business processes for transferring records to TNA, and they are currently being reviewed internally at TNA before being made more widely available

for comment and feedback. We are also in the process of revising our redaction guidelines so that they include guidelines for redacting electronic records.

As government departments begin to use Seamless Flow, we will provide full training in using the new business processes together with the new software solution (the transfer system).

The Business Change project also owns the stakeholder communications plan—which details how we will provide lots of updates on Seamless Flow. This

newsletter is one of the vehicles we're using to provide regular information to government departments about Seamless Flow.

Following on from our successful Open Day in the summer of 2006, we're now busily planning our next Open Day to be held late November 2007. This Open Day will focus on the transfer application—giving attendees opportunity to try it out first hand.

We also have a strong website presence which includes copies of our technical documents. See

[http://www.nationalarchives.gov.uk/electronicrecords/seamless\\_flow/default.htm](http://www.nationalarchives.gov.uk/electronicrecords/seamless_flow/default.htm)

## Next Steps

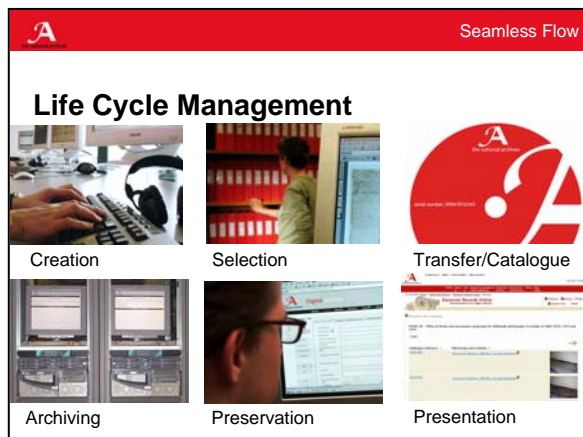
From now until April 2008, our activities are focused on completing the programme. This doesn't mean that Seamless Flow will stop, it will just become part of our normal way of doing things at TNA. We will continue to support departments in their use of Seamless Flow and maintain and enhance our software

solutions. Specifically over the coming months, we will be:

- Holding planning meetings with the first 6 departments who will begin using Seamless Flow in the period up to April 2008; and training these departments in the new business processes and in the transfer system.

- Complete the transfer system testing and begin roll-out.
- Migrate existing electronic records into the Digital Object Store.
- Complete development for Active Preservation by March 2008.
- Launch Electronic Records Online Version 3 by March 2008.

## Seamless Flow Lifecycle



### High Level Lifecycle

- Step 1. Record Created
- Step 2. Appraisal and Selection. Records are redacted if required.
- Step 3. Transfer to TNA
- Step 4. Test record and load successful record into Digital Object Store
- Step 5. Actively preserve record
- Step 6. Make presentation copy and present open records to the general public. Closed records can be accessed by government departments over the GSI Network.

# Focus on .... Redaction

## By Kelvin Smith



The redaction of electronic records is a relatively new area of records management practice, and raises unique issues and potential risks. It has therefore featured strongly in the business change project under the Seamless Flow Programme.

The simplest type of electronic record to redact is a plain text file, in which there is a one to one correspondence between bytes and displayable characters. Because of this direct correspondence, redacting these formats is simply a matter of deleting the displayed information - once the file is saved, the deleted information cannot be recovered.

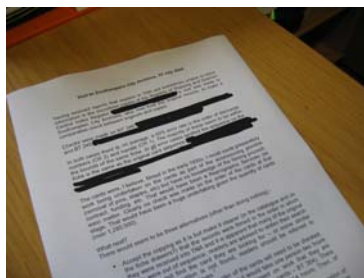
However, the majority of electronic records created using office systems, such as Microsoft Office, are stored in proprietary, binary-encoded formats. Binary formats do not have this simple and direct correlation, and may contain significant information which is not displayed to the user, and the presence of which may therefore not be apparent. They may incorporate change histories, audit trails, or embedded metadata, by means of which deleted information can be recovered, or simple redaction processes otherwise circumvented. These formats are also usually the property of the software house that developed them, and these companies have typically regarded providing public documentation of these formats as against their commercial interests.

In addition, cryptographic and

semantic analysis techniques can potentially be used to identify redacted information. It is therefore essential that any redaction technique be secured to eliminate the possibility of redacted information being recovered.

The redaction of electronic records should always be carried out in accordance with the following principles:

- The original or master version of an electronic record must never be redacted—redaction must always be carried out on a new copy of the record, either in paper or electronic format.



- Redaction must irreversibly remove the required information from the redacted copy of the record. The information must be completely removed from the bit stream, not simply from the displayable record.
- Redaction should always be carried out using methods which have been fully security tested.
- Electronic redaction should be carried out in a controlled and secure environment that provides access only to those trained and authorised to carry out redaction.
- All intermediary stages of the redaction process should be deleted. Only the original record and the appropriately redacted copy should be retained.

The National Archives examined a number of different approaches to

electronic redaction in 2006 and preliminary findings were included in the integrated Redaction Toolkit, available on TNA's website at:

[http://www.nationalarchives.gov.uk/documents/redaction\\_toolkit.pdf](http://www.nationalarchives.gov.uk/documents/redaction_toolkit.pdf)

*The toolkit is now being revised in the light of experience and a new version will be issued in October. It will draw upon the use of newly available software for redacting electronic records.*

### Documentation

The redacted version of the record should be saved into an electronic records management system (ERMS) at the time of creation. This will automatically record the identity of the individual saving the document as well as the time and date. Recording the reason for redaction will need to be input manually. Some ERMS solutions offer additional functionality whereby it is possible to create a rendition, which is a related instance of the original document. The rendition can be redacted and saved within the ERMS and its relationship to the original document will be recorded by the ERMS.



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