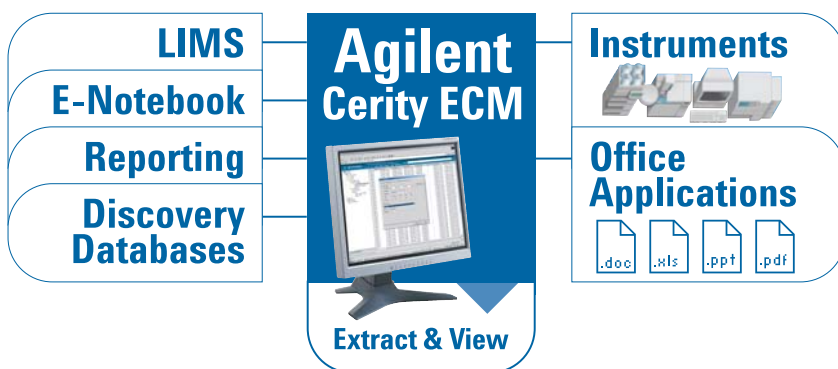# Cerity ECM 3.x – What's New

May 2005

Specifications

Introduction

Cerity ECM 3.2 is the latest release of the Agilent Cerity ECM software. This document describes the new features of Cerity ECM introduced in the revisions since Cerity ECM v 3.0. Up to revision 3.1 this product was sold under the brand name CyberLAB from Scientific Software, Inc.

Agilent Technologies

1. Enhancements in Cerity ECM revision 3.2 (release March 2005)

BPM Integration

Cerity ECM 3.2 incorporates new user interfaces to expose process automation functionality provided by the new Business Process Manager (BPM) engine. For design time, the Cerity ECM desktop components have been extended to support Microsoft Visio 2003 to provide a workflow modeling tool for designing and configuring BPM workflow templates. This workflow modeling tool is called BPM Designer (figure 1), and it provides an easy, drag-and-drop, point-and-click environment for implementing BPM without coding. With BPM Designer, users can create new workflow templates, save them to the Cerity ECM repository, register them with the BPM database, and update them (i.e. version them).

For runtime, the Cerity ECM Inbox has been extended to allow users to receive BPM workflow packages, i.e. work items or documents (figure 2). In addition, a new file menu item has been added to the Cerity ECM Web Client right-click menu to allow documents to be sent into a workflow on an ad-hoc basis. Cerity ECM folder properties have also been extended to allow BPM workflow templates to be linked to a folder such that any files added to the folder are automatically routed into a workflow based on the template. Finally, a BPM Status screen has been added to the Cerity ECM Administration screen to monitor workflows, individual workflow tasks, and error conditions (figure 3).
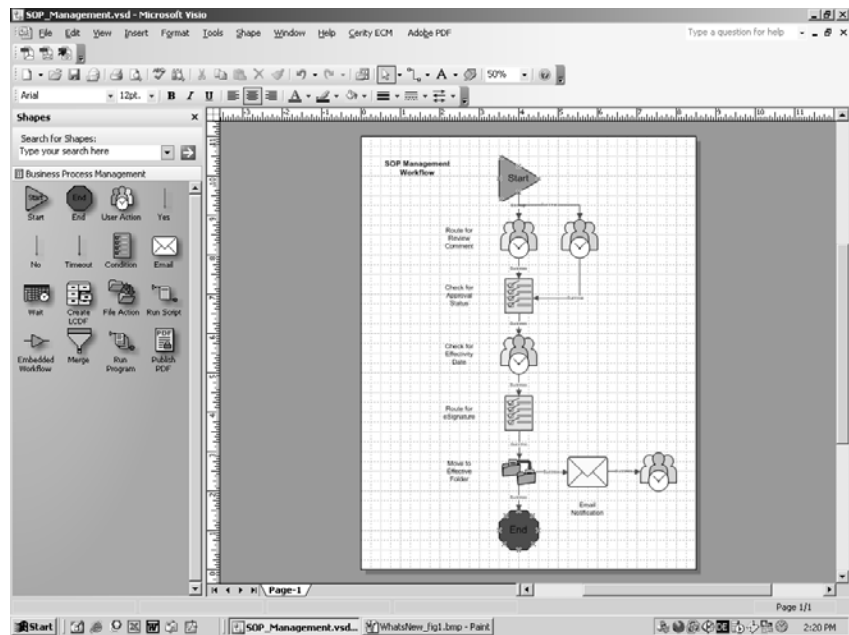

Figure 1
BPM Designer.
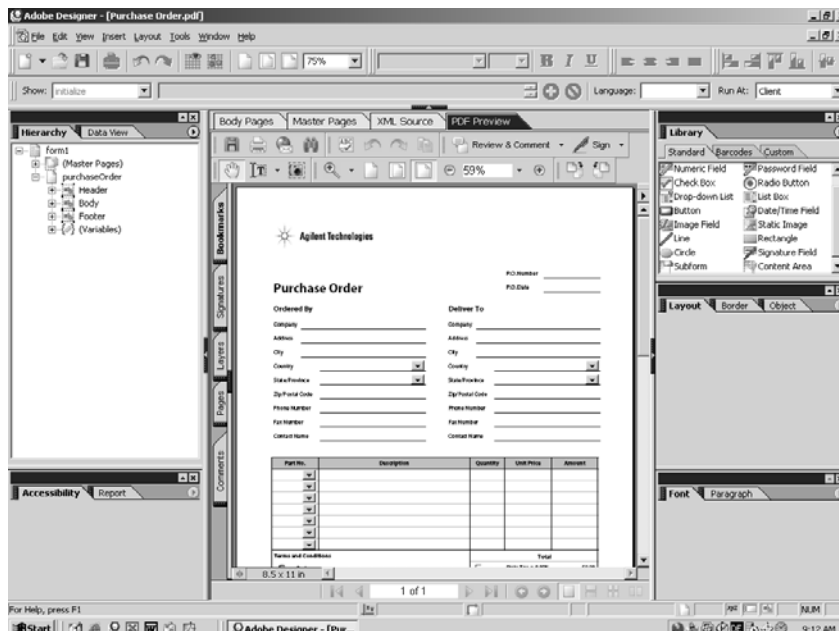

Figure 2
BPM Inbox.

Figure 3
BPM Status screen.

These BPM integration components require a BPM Server license, which is a separate, add-on module for Cerity ECM.

Adobe eForms Integration

To support the capture of structured data, Cerity ECM 3.2 incorporates an integration with the Adobe electronic PDF forms solution (figure 4). This integration includes a new PDF form filter pack that can extract key-value pairs from a PDF form file added to the Cerity ECM repository. PDF forms can be visually created using Adobe Designer 6.0, and they contain interactive form fields and an XML form definition. Once interactive PDF forms have been created, they can be stored in the Cerity ECM system, indexed and made searchable as interactive PDF files. As these PDF forms are included into business processes (such as sales requests, purchase orders, safety assessments, maintenance requests, etc.) they can be used to capture data, which is dynamically sent to the running business process (e.g. BPM Inbox) via a new Web service and displayed in an Acrobat PDF. End users can use Acrobat to interact with and fill out the PDF forms, and then submit the data into the Cerity ECM BPM system via a new Submit Data toolbar button in Acrobat. Data captured in PDF forms can be acted upon as part of an automated business process. For example, if a purchase request form amount is over $500, then it may be required to be routed to a VP for approval as a matter of corporate policy, and the Business Process Manager (BPM) server can manage and control this business logic (and associated flowpath) after the PO amount has been captured from the PDF form and extracted by the PDF form template. Alternatively, purchase requests under $500 may be routed to an alternate flowpath in the business process. Electronic PDF

Figure 4
Adobe Designer 6.0 is used to visually define interactive PDF forms.

forms can be implemented to automate and streamline traditional paper-based business processes when used in conjunction with Business Process Manager.

Technology-neutral File Format (TNF) Conversion

For long-term data archival, raw data reports from analytical laboratory instruments can be converted to an XML-based TNF format via a new TNF converter. TNF converters are available for the Cerity ECM 3.2 release for Thermo Atlas, Thermo Multichrom, (Agilent) HPLAS, Agilent Chemstation, and Waters Millenium formats. The TNF equivalent XML file that is created by the TNF converter is stored in the Cerity ECM repository in an SSIZIP file, along with the original raw data file, and an XML viewer (based on the AnIML XML schema) is available to display the TNF data. This XML viewer allows the data to be viewed by users

without requiring installation of the native application.

Outlook Email Archive

A new button has been added to the Outlook toolbar to allow Cerity ECM Desktop users to archive one or more emails into the Cerity ECM repository on an ad-hoc basis. Multiple emails can be sent as an SSIZIP file, and email attachments can be included as part of the SSIZIP package if desired. Email management and archiving has become more of a problem for corporations, and this feature is the first phase in an overall email management strategy. Emails that are archived through this feature can be indexed and made searchable for improved traceability and corporate compliance.

Microsoft Excel Spreadsheet Remediation

To track changes to Microsoft Excel spreadsheets, a new cell-by-cell audit trail has been added for

spreadsheets that are stored in the Cerity ECM repository (figure 5). Standard password spreadsheet cell protection within Excel has been replaced with a new mechanism controlled by the Cerity ECM system with a new privilege. This allows a more robust access control for financial and analytical spreadsheets with complex macros and formulas. Additionally, a new visual comparison tool has been added to compare two versions of a spreadsheet and easily see changes in formulas and content/data. Finally, a new permission has been added to allow lock-out of Excel menu items, macros and hot keys, creating a "data entry only" application for users of standard spreadsheet templates. This functionality for spreadsheet remediation has been bundled into a new license, Remediation Services for Microsoft Excel.

Figure 5
Remediation Services for Microsoft Excel incorporates a cell-by-cell audit trail.

SAFE Electronic Signatures
To help customers better protect their intellectual property, Cerity ECM 3.2 incorporates a new SAFE eSignature Plug-in for the Kyberpass PKI infrastructure. SAFE (Secure Access for Everyone) is an emerging industry standard API (led by the SAFE LLC consortium) that promotes security via a PKI trust infrastructure. The SAFE electronic signatures provide Agilent customers with legally binding electronic signatures (equivalent to an electronic document notarization).

Mass Spec Data Viewer
Cerity ECM 3.2 incorporates a new Mass Spec Data Viewer to allow users to view mass spec files from Agilent Chemstation, Waters® MassLynx™ and Thermo Xcalibur® instruments without requiring them to have the native application installed on their desktops.

Internet Explorer (IE) Integration
A new toolbar button has been added to the Cerity ECM Desktop Client 3.2, allowing users to save Web pages into the Cerity ECM repository as Web archives (.mht). In addition, a new Attribute Extraction Service (AES) has been created to filter and index .mht files as they enter the Cerity ECM repository.

Template Awareness
Cerity ECM 3.2 is now Microsoft Office template-aware, meaning that when a user opens an office template file (e.g. .dot for Word, .pot for PowerPoint, .xlt for Visio, etc.), a new file is created from the opened template rather than inadvertently overwriting it.

PDF Template Import/Export
A new PDF Template Import/Export tool has been included to export PDF templates from the Cerity ECM repository in XML format, or importing them into the Cerity ECM repository from a local file system. This new

feature helps customers simplify system migrations and upgrades, as well as share PDF templates across Cerity ECM instances.

XML Web Service (SOAP) Support
In Cerity ECM 3.2, the RDS application-programming interface for the Cerity ECM Server supports web services, meaning that RDS API calls are available via XML arguments over SOAP via HTTP.

Litigation Hold for Record Retention
Added Litigation Hold functionality to prevent records in an expired record retention class from being deleted.

Search Litigation Hold Key
Added Litigation Hold Name key to Smart Search queries and key to Advanced Search queries so you can search for files with a particular litigation hold.

Microsoft Office and Visio 2003 Support
Desktop Client now supports Microsoft Office 2003.

## 2. Enhancements in Cerity ECM version 3.1 (October 2004)

Send-To
Added the Send-To menu item to the Microsoft Windows Explorer program to allow the sending of files or folders from Windows Explorer to the Cerity ECM repository via a simple right-click command (figure 6).

Smart, Advanced Search Enhancements
A new Expiry Date key was added for Smart Search queries and File Information.General.Information.Expiry Date key for Advanced Search queries so users can search for files with a particular record retention expiration date.

Records Retention Enhancements
- A new command has been added to allow users to change (override) the record retention expiration date for one or more files (figure 7).
- Date/time synonyms can now be used as an event for expiring a retention class.
- A new Litigation Hold functionality has been added to prevent records in an expired record retention class from being deleted (figure 8). In addition, a new Litigation Hold key has been added to Smart Search queries and a new File Information.General.Information. Litigation Hold Name key has been added to Advanced Search queries so you can search for files with a particular litigation hold.
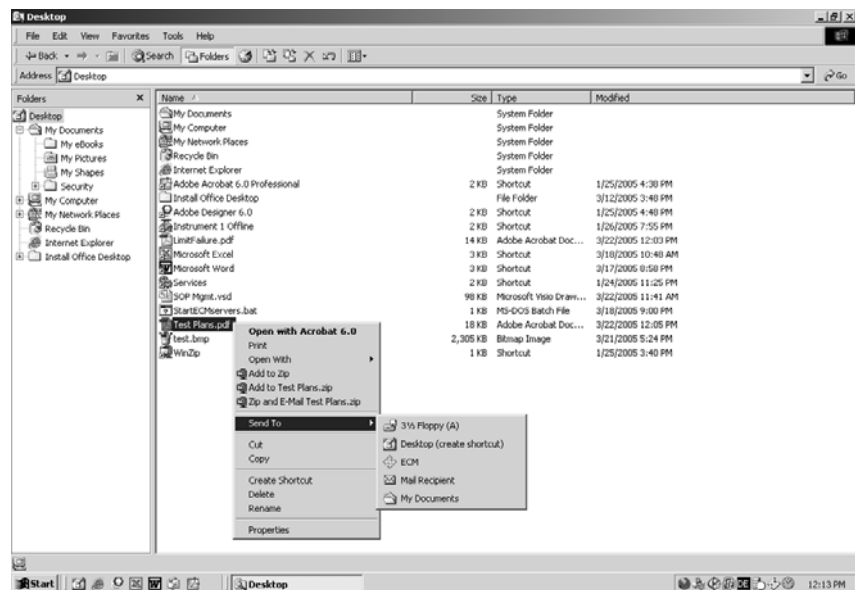
Figure 6
Send-To (Cerity ECM) allows documents to be added to the Cerity ECM repository via a simple right-click from Windows Explorer.
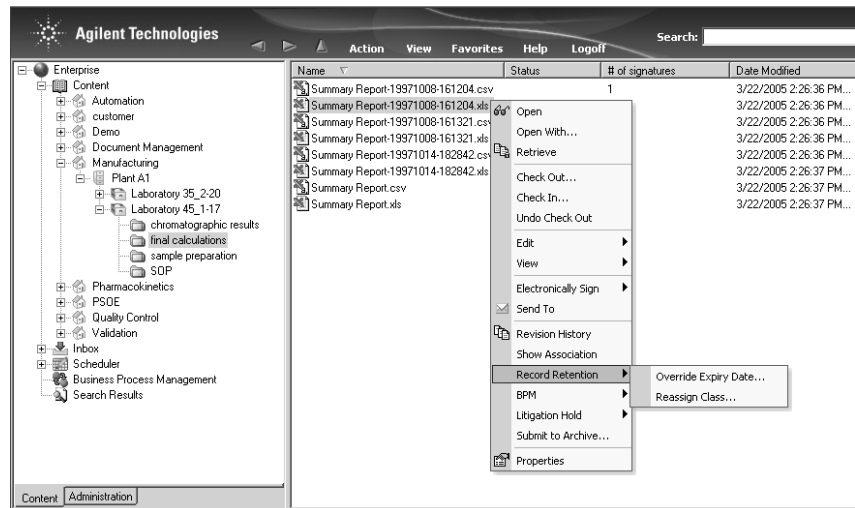
Figure 7
A right-click command allows users to change the record retention expiration date for a file.

Support for External Database Lookups

Support for external database lookups has been added, allowing for the use of custom or external dictionaries for running queries (figure 9). For example, when a file is uploaded into the Cerity ECM repository, and a user enters a value for a user-defined key, an external database query can return a set of key-value pairs based on the user-defined key-value pair. This external metadata can then be added to the file properties in the Cerity ECM system.

TNF (Technology Neutral Format)

TNF software was added to automatically create XML-based AnIML (Analytical Information Markup Language) files from certain analytical proprietary files in a SSIZIP. The new AnIML files are then added to the original SSIZIP without modifying the original files. This feature is important for long-term data archival, as it stores data generated in proprietary applications in a technology neutral format based on XML.

3. Enhancements in Cerity ECM version 3.0.1 (March 2004)

Maintenance release (bug fixes and patch rollups only).

4. Enhancements in Cerity ECM version 3.0.0 (March 2004)
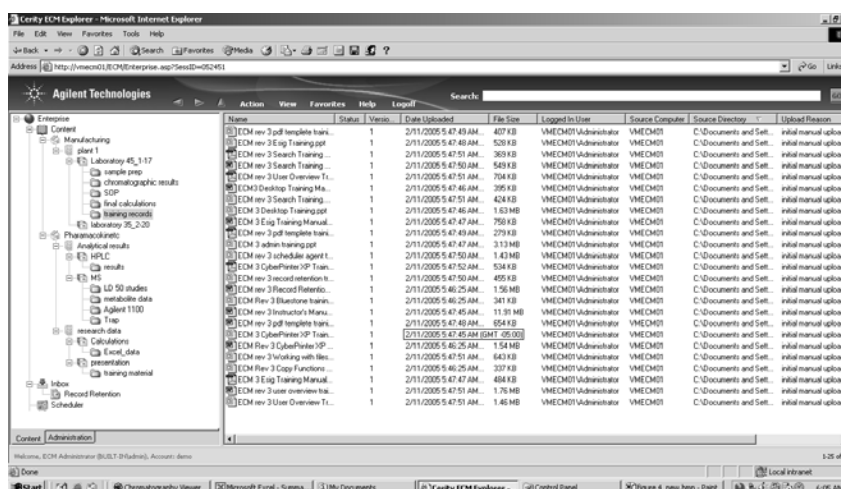
New User Interface

The Web client interface for Cerity ECM was completely redesigned in v3.0, with a new look-and-feel based on the familiar Windows Explorer (figure 10). Now users can access secure content via a portal page in the right-side view pane for access to external con-
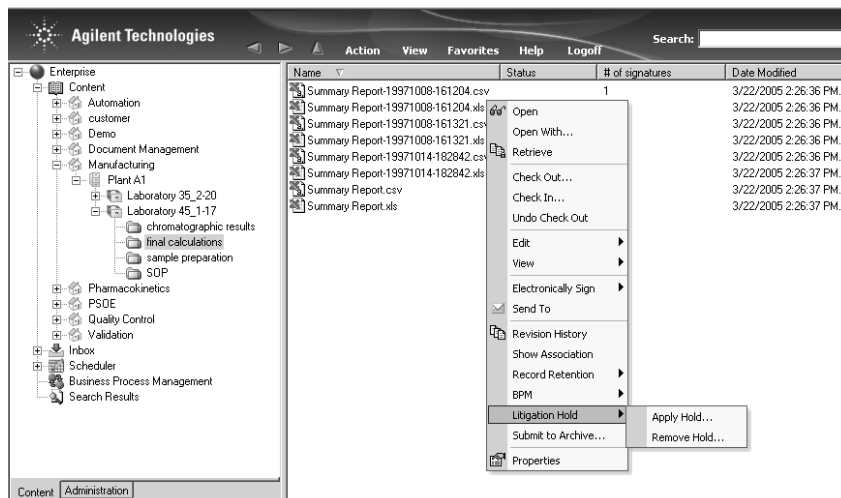
Figure 8
A right-click command allows users to prevent records in an expired record retention class from being deleted.
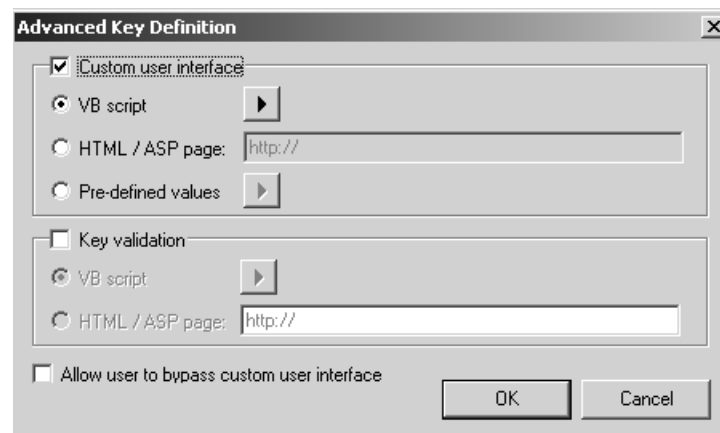
Figure 9
External database lookups are supported in v3.1 and beyond for querying external dictionaries.

Figure 10
The Cerity ECM Web Client was given a new, familiar, Windows Explorer look-and-feel for v3.0.

6

tent and intranets. This new user interface greatly adds to end user adoption and ease-of-use of the Cerity ECM system.

Records Retention Services
A new Records Retention Services module was added for automating the purging of records from the Cerity ECM system. This module allows users to define document retention classes based on expiration dates, assign a set of reviewers to approve purging of records, and define arbitration parameters. Figure 11 shows the user interface of the Records Retention Services module.

Synonyms
The concept of synonyms was added for filter keys, allowing for the mapping of keys across disparate applications to a single, searchable key phrase. Figure 12 shows the user interface for the entry of synonyms. Synonyms allow users to create a common dictionary, making searching more accurate and much easier.

Check-in/Check-out
Collaboration capabilities for check-in and check-out of files managed by the Cerity ECM repository have been added to allow users to lock files, allowing only one user to make changes (figures 13 and 14). During file locking, i.e. check-out, files are downloaded to a user's local file system, and they become read-only for all other users in the Cerity ECM repository.

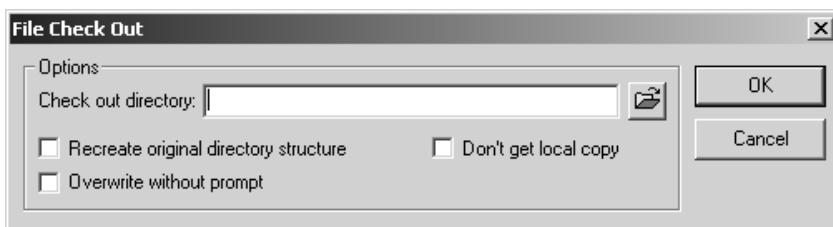**Scalable Vector Graphics (SVG) Plug-in**
A new Scalable Vector Graphics (SVG) Plug-in for Adobe Acrobat was added to the Adobe Acrobat menu drop-down list, allowing users to extract scalable vector graphics from PDF files for use in
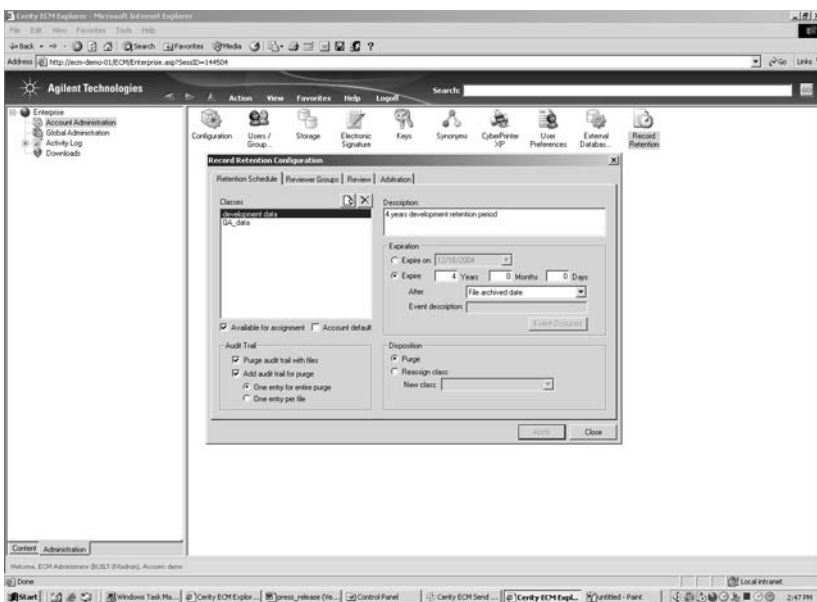
Figure 11
Records Retention Services module user interface.
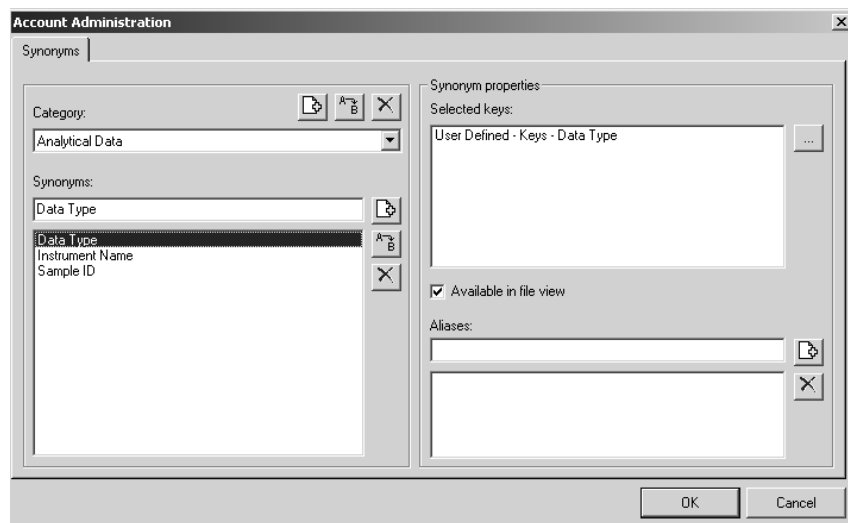
Figure 12
Synonyms allow keys across disparate applications to be mapped to a single, searchable key in the Cerity ECM system.

Figure 13
Check-out dialog box.

other applications and (optionally) add a URL link back to the original data in the Cerity ECM repository. Figures 15 and 16 compare a Scalable Vector Graphics extracted from PDF with the SVG Plug-in for Adobe Acrobat (figure 15) and Graphics extracted from PDF with standard Acrobat copy/paste features (figure 16). This SVG plug-in makes creating reports and presentations in Microsoft Office applications such as Excel, Word and PowerPoint much easier, and maintains image clarity as graphics are copied, pasted and resized.

PDF Template Enhancements

The PDF template features were enhanced to enable scanning of a page or document for search criteria (i.e. key-value pairs). Figure 17 shows a dialog box for the PDF Template Plug-in, which allows users to specify which information is to be extracted. This new feature is important when users need to extract data from PDF files that do not follow a standard or fixed format (i.e. data moves on page and is never in the same place). Additional capabilities were added to enable extraction of data from tables and Scalable Vector Graphics (SVG).

Scheduler Enhancements

The Scheduler program has been enhanced with a new management architecture, the ability to run multiple schedules per Scheduler Agent simultaneously (multi-threaded), and edit previously defined schedules. This new architecture maximizes overall scalability and allows for the enterprise deployment of Cerity ECM in environments with multiple data generators (i.e. labs, instruments, etc.).
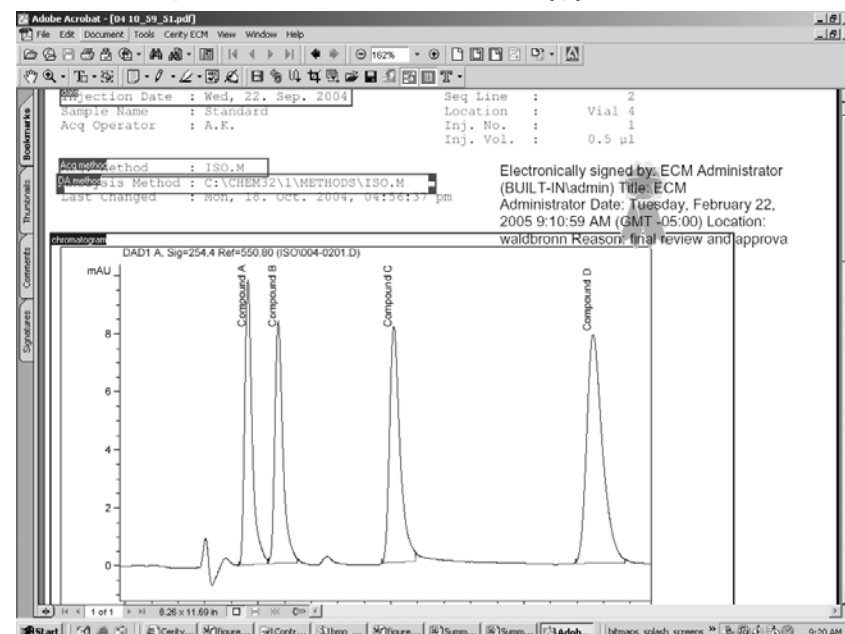

Figure 14
Check-in /Add Files dialog box.
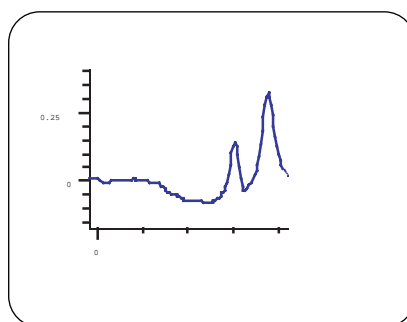
Figure 15
Scalable Vector Graphics extracted from PDF with SVG Plug-in for Adobe Acrobat.
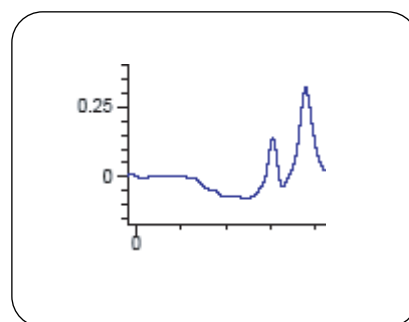
Figure 16
Graphics extracted from PDF with standard Acrobat copy/paste features.

Figure 17
PDF Template Plug-in for Adobe Acrobat dialog box.

## Server Administration Enhancements

The Cerity ECM Server Administration was enhanced with a new, central view of the status of all Scheduler, file transfer and application services (figure 18).
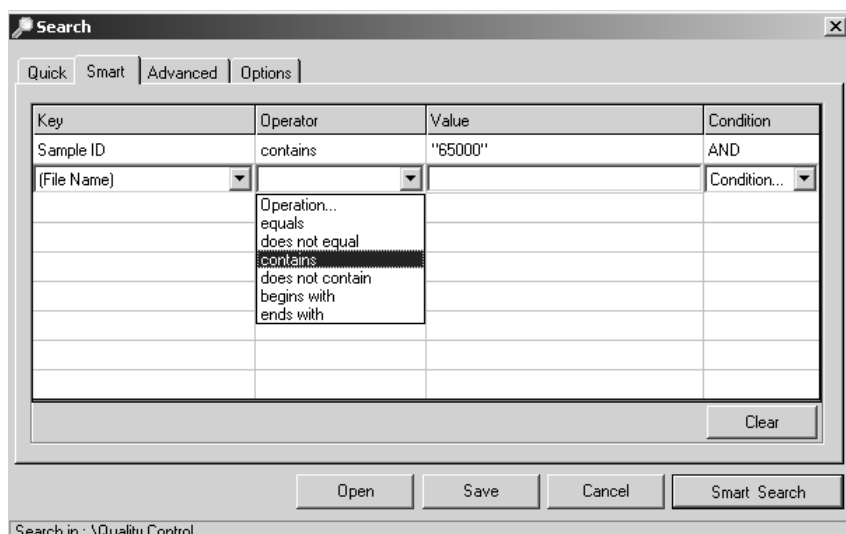
Enhanced Search Queries

Queries are now run in a background process to allow users to continue working while queries are executing and to allow for multiple searches at once. A new search node allows users to save search results. A new Smart Search query allows for searching of synonyms and general file properties (figure 19), and an enhanced Advanced Search (figure 20) improves ease of use.

Database Enhancements

The Cerity ECM database server architecture was revamped for enterprise deployments, and significant speed improvements were made. This new database architecture now supports a federated system configuration where files can be stored locally in various geographic regions (e.g. Dallas, NY, Amsterdam), and the database can be managed centrally.
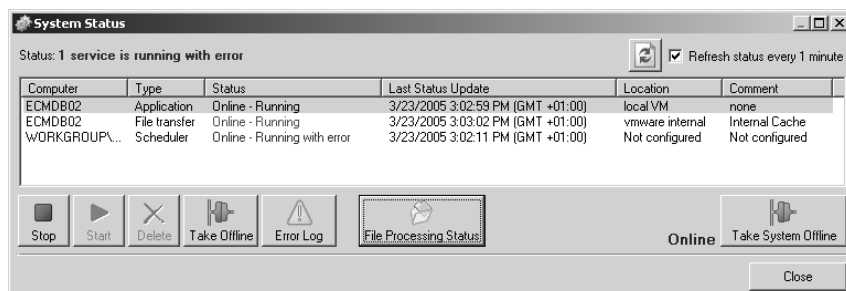
Figure 18
Cerity ECM Server System Status screen.

Figure 19
Smart Search.
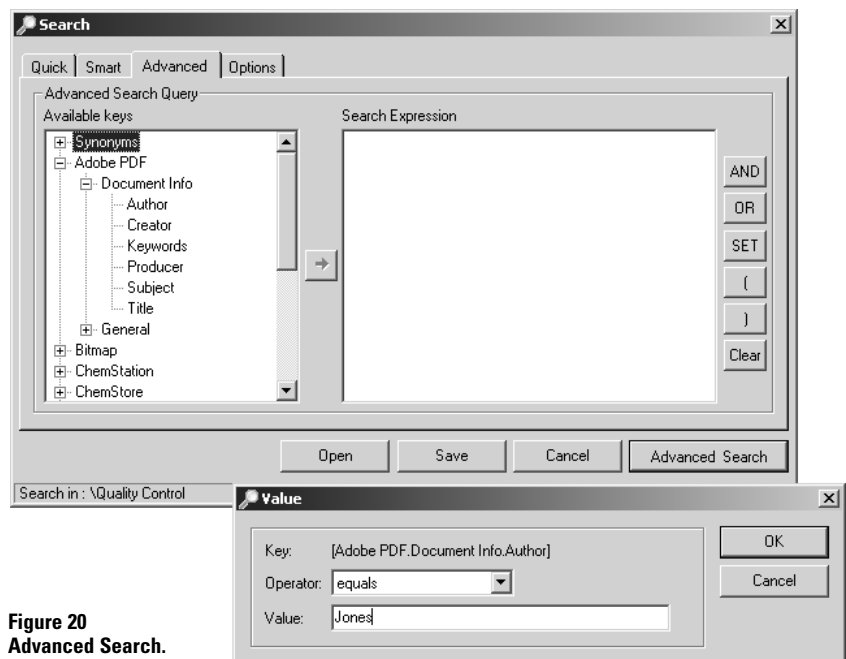
Figure 20
Advanced Search.

9

Audit Trail Enhancements

The audit trail was improved to enable exporting it as an XML file for printing. It was also split into two separate parts, with the file-related entries (e.g. check-in, import, delete, view, etc.) written to the Audit Trail (figure 21) and the system-related entries written to a new System Log (figure 22). Both the Audit Trail and the System Log can be filtered by files, folders, system and scheduler events. The audit trail can also be stored and archived with a file.
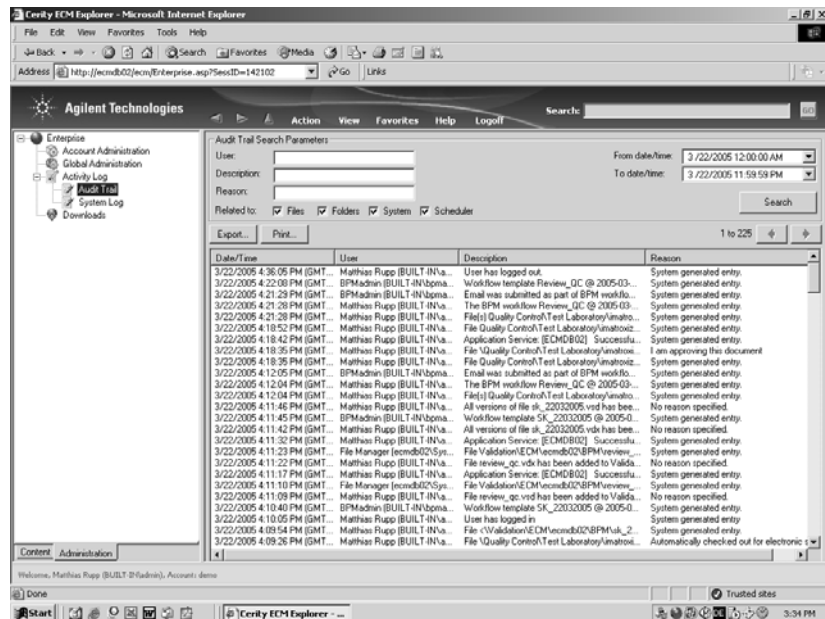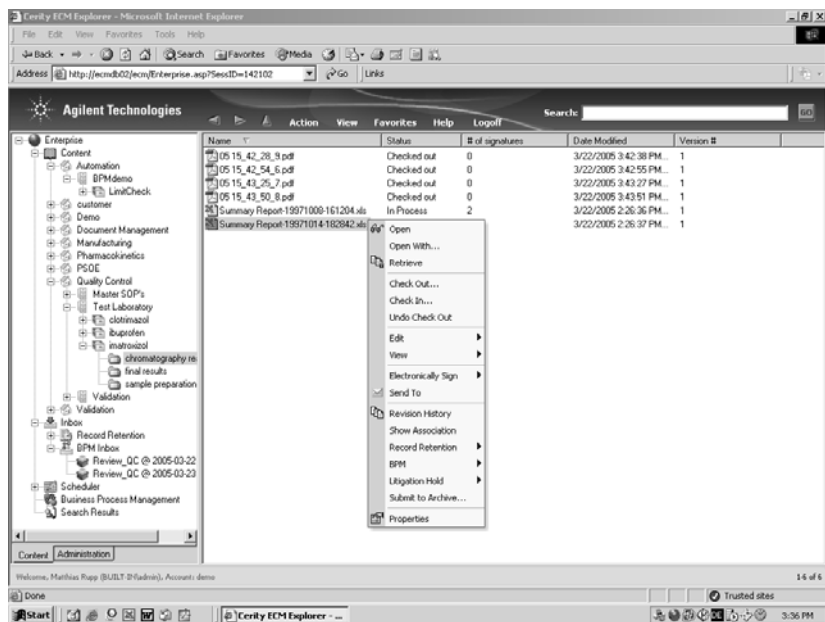

Figure 21
Audit Trail.
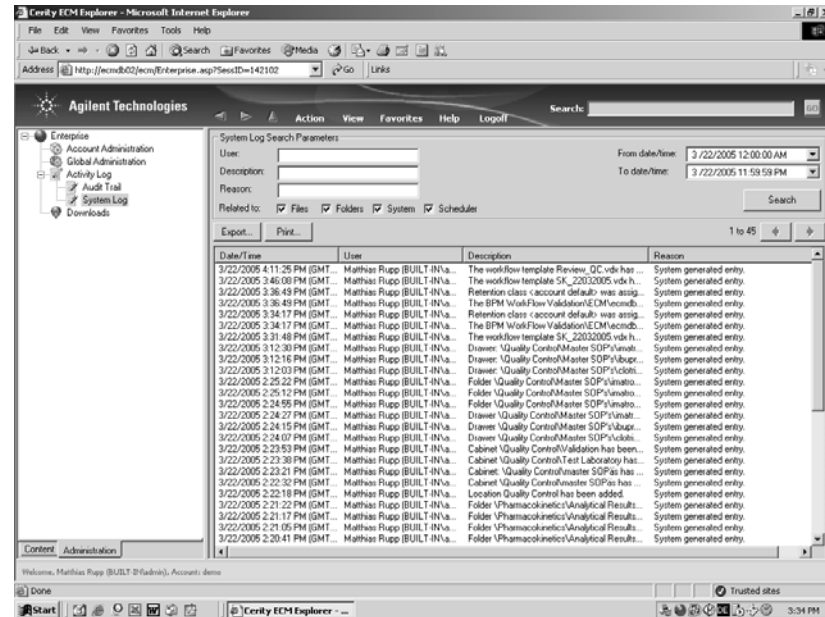
Figure 22
System Log.

New Right-Click Menus

New right click menus were added to the Cerity ECM Web Client content view window as shown in figure 23. Commands available on the right click menu include: file Open, file Open With, Retrieve (file to local system), Check-in/Check-out, Undo Check-out, Edit, View, Electronically Sign, Send To (via email), Revision History, Show Association, Record Retention, BPM, Litigation Hold, Submit to Archive (device), and (view) Properties.

Figure 23
New right-click menus in the Cerity ECM Web Client content view.

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