

# **DP17: Will Your Apps Die with OV/400 at V5R1?**

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# Conference Session Abstract

**Thousands of AS/400 applications use the OfficeVision/400 function. Many will fail when OS/400 V5R1 is installed and they must be modernised or replaced. This IBM Redbook presentation by one of the authors gives a high-level view of selecting the best approaches, including Notes and Domino where appropriate.**

## **NOTE:**

**Some new items have been added to this presentation since the Redbook. They appear in Blue.**



# Agenda

**Introduction**

**What is OfficeVision/400?**

**OfficeVision/400 'End of Life' & IBM Plans**

**CL Commands, APIs & User Exits**

**Implications for Applications**

**OV/400 Functions & Alternatives**

**Redbook Samples**

**Actions**

**Ordering Redbooks & more Information**



# What is a Redbook?

## Redbooks

- International Technical Support Organization (ITSO)
- Intended Audience

## Residency

- ITSO Rochester
- Volunteers
- Benefits

## Redpieces

- pre-release version, free download

## Feedback

- via Web



# This Redbook

## Title

- How to Replace OfficeVision/400 in Your Applications: Looking at Domino for AS/400 and AS/400 Alternatives

## The Team

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# What is OfficeVision/400?

## 1. Calendar

- (Diary). Events, reminders, meetings, multiple view, free time search. Remote support. Job scheduling.

## 2, 3, 4. EMail

- Messages, notes, documents, PC files, confirmation of delivery, action due, etc. Interface to AnyMail for SMTP addressing. Integration with fax.

## 5. Document Library (document profile)

- File documents, PC files, hard copy reference, faxes, etc. Folder structure. Open to PCs. Index external and/or text content. Search.



## What is OV/400? contd.

### 6. Word Processing (document content)

- Fast, high function, batch format and print, graphical interface, poor font support, PC editor option.

### 7. Directory

- List of people, description, name, EMail address, phone, fax, location, organisation, department, reports to, etc. plus search.

### 8. Database & Data/Text Merge

- High performance merge of database or Query data with text. Conditional, data-driven output.

### 9. Administration, Security and User Function

- Enrollment profiles, authority to calendars, email, documents, etc. Document conversion tools.



# What is JustMail/400?

## Subset of OfficeVision/400

- Mail
- Directory

**Note: In this presentation, please assume that references to OfficeVision/400 also include JustMail/400 for these functions.**





# Withdrawal of IBM Support

## The Timescales

- End of Support was May 2001
- V5R1 Deletes OV/400
- '... there are changes in OS/400 V5R1 that cause the products to be incompatible. During the upgrade to V5R1 the OfficeVision product is deleted from the system; however, your data is not deleted. Prior to the upgrade, you should delete the enrollments for your OfficeVision users and delete all mail, calendars, documents, and folders that you no longer need, unless you plan to use replacement products to access that data. Users who reinstall OfficeVision on V5R1 should not expect it to run correctly.'
  - OS/400 V5R1 Memo to Users

## What Exactly Happens?

- No OV/400 function remains
- Some OS/400 function is affected



# IBM Plans

## Strategy is Lotus Notes & Domino

- Clear message, no serious alternatives.
- **iSeries** is preferred platform
  - better performance
  - better integration
  - more manageable

## Policy is Migration AND Coexistence

- No 'Big Bang'.
- No 'Rip and Replace'.

## Offers and Promotions

- OV/400 user licence Trade-up to Lotus Notes licence + other country-specific

## Extensive Support

- 200 trained specialists.
- Dedicated web site.



# IBM Plans, cond.

## Extensive Migration & Coexistence Toolset

- Domino for AS/400 - Mail & (until R6) Directory Coexistence
- OV/400 to Notes Migration Toolkit (withdrawn, but customer may have)
  - migrated mail and calendars
- Lotus Calendar Connector for OV/400 (withdrawn but available as a cross-platform Lotus product)
- BNDW for OS/400 (BlueNotes Document Warehouse)
  - OV/400 Conversion Tool Module accesses documents from Notes. Also converts mail and calendars to documents,
- BNDM for OS/400 (BlueNotes Direct Messaging)
  - Data/text merge
- BNOP for OS/400 (BlueNotes Office Portal)
  - OV/400 menu replacement
- BBNP for OS/400 (BlueNotes BluePages - Now Directory Synchronisation)
  - New Directory synch
- EverGreen/400
  - 5250 email & calcs client to Domino
- Third Party Products



# What will Happen to Applications?

## It Depends on the degree of OS/400 integration

- Functions using OS/400 APIs will give errors
- Functions using some OS/400 APIs may give errors or unpredictable output
- Some of the changes may not be obvious, e.g. print format.



# CL Commands, APIs and User Exits

## Introduction

- The many APIs, commands and user exits provided by OV/400 allow for easy integration with other AS/400 products and line of business applications. End users can work entirely from OV/400 panels or OV/400 can be masked and end users can work entirely from their primary line of business application. This has resulted in OV/400 being integrated in thousands of applications.

## CL Commands, APIs and User Exits

- The term API is used to refer to any application programming interface. However, in OV/400 terms we must separately consider:
  - CL commands
  - APIs and
  - User Exits.
- The next three foils aim to explain the differences.



# OV/400 CL Commands

- The OV/400 commands are like other AS/400 Control Language (CL) commands and can be used stand-alone as well as in CL programs. They are designed to provide the link between applications, database files, programs and OfficeVision/400 objects such as directories, distribution lists and document library objects. The OfficeVision/400 and related CL Commands are listed in the Redbook



## OV/400 APIs

- Application Programming Interfaces are programs that belong to the user domain but may operate in the system state. They are directly callable from high-level language programs. They allow you to:
  - Use system information and functions that are not available through CL commands.
  - Provide better performance when getting system information or when using system functions that are provided by CL commands.
  - Use calls from high-level languages to those interfaces.
- There are a dozen or so OfficeVision/400 APIs. Their use is largely restricted to:
  - 1. OfficeVision/400 application enabler
  - 2. Optimising performance when calling an OfficeVision/400 function
  - 3. Displaying calendar information in an OfficeVision/400 session
- After the withdrawal of OfficeVision/400, only the application enabler APIs (at an OS/400 V2R2 level) will be available.



# OV/400 Exit Programs

- An exit program is a specific point in an IBM software product where a user program or application can be invoked by the IBM software product upon some condition. User exits are provided to modify or extend the functions of an IBM software product with which an application program is running, where the modification or extension affects only that particular application.
- There are half a dozen OfficeVision/400 user exit programs. As they are called from an OfficeVision/400 user session they will not be appropriate in future. They are used in two main areas:
  - • Application enabler
    - Replaced in a Domino environment by IBM BNDW for AS/400 (BlueNotes Document Warehouse).
  - Directory search
    - Part of OS/400 and is still available through CL commands when called from other applications.





# OS/400 CL Commands

**Many 'OV/400' commands are in fact 'OS/400' and will remain**

- e.g. SAVDLO, SNDDST, CRTFLR

**Much 'OV/400' function is in fact OS/400 and will remain**

- e.g. Shared Folders, Directory

**Some OS/400 commands use OV/400 function**

- e.g. PRTDOC
- Their function will be reduced or command will fail
- Most can be directed to call other applications



# Am I Using OfficeVision/400?

## Is OV/400 Installed?

- GO LICPGM
- See Redbook for IBM Licence numbers

## Is OV/400 In Use?

- Look for enrolled users
- See Redbook to look for:
  - recent document edits, future calendar entries, scheduled jobs, Facsimile Support integration

## Do I have OV/400 Data?

- See Redbook for:
  - Counting documents and folders, counting EMail items, counting Calendars and entries



# Am I Using OfficeVision/400? *(continued)*

## Are OV/400 APIs In Use?

- See Redbook for audit information
  - journalling API usage
  - scanning source

## Do My Own Applications Contain OV/400 APIs?

- Ask the developer
- See Redbook for audit information

## Do my documents contain data/text merge instructions?

- Inventive Designer tool (I-D Web site)

## Do Third Party Applications Contain OV/400 APIs?

- Ask the software house
- See Redbook for audit information



# Development Guidelines

## How to Use The Redbook

- Determine the OV/400 functions to be replaced
- Review the matching Redbook section
- Select products and study in detail

## Development Strategies

- Quick fix or major rewrite, or fix then rewrite?
- What clients? 5250? GUI? Notes? Web?
- Future of 5250 datastream
  - no longer strategic
  - no longer tied to SNA or twinax
  - clear cost penalties in hardware (still) and in Client Access/400



# Development Guidelines, contd.

## Notes/Domino Development Techniques

- @ functions. LotusScript, JavaScript, Java
- DECS, Lotus Enterprise Integrator, APIs (separate Redbook)

## Client-Server Development Techniques

- CA/400 Solution Developer Kit for ActiveX and OLE DB

## Enabling OS/400 Commands

- Tell OS/400 to use non-OV/400 or no other function, e.g. CRTDOC

## Shared Folders vs. /root of IFS.

- Better performance in IFS, but no document profile
- Perhaps too early to exploit - some tools not ready
- Use shared folders for now



## Guidelines, contd.

### OV/400 Database Files

- API's protected from underlying changes. Unlikely to change now.
- Use directly or use as basis for redesign

### Testing

- Try new editors for fidelity of conversion
- BlueNotes demo for sample complex OV/400 documents
- Migrate users to Notes first

### OV/400 Data Cleanup

- Delete OV/400 data before deleting OV/400 program
  - the housekeeping commands are part of OV/400
- Delete selected OV/400 program components and test
- Keep the manuals



# Are Notes and Domino the Answer?

## Usually, but not always

- e.g. OS/400 or Job Scheduler for jobs
- AFP for data/text merge with bar codes

## Most function is available in Notes/Domino R5

- email, calendars, directory, etc.

## Other function is accessible from Notes/Domino

- document library

## Lots more function too

- workflow, Web, etc

## A few gaps in the Notes/Domino picture

- external documents, WP editor, query/text merge
- filled by IBM and 3rd party products



# OV/400 Functions and Alternatives

**Overview**

**Main Withdrawal Effects**

**Our General Approach**





# OV/400 Functions - IBM Alternatives

OV/400 Function	Sub-Function	Effect	Notes User	NWS User	5250 User	PC user
<b>Calendars</b>	Scheduling	Fail	Notes		EG/400 + Domino	
	Jobs	Fail	OS/400 Job Scheduler	OS/400 Job Scheduler	OS/400 Job Scheduler	
<b>EMail</b>		No UI	Notes	Domino	EG/400	POP3
<b>Editor</b>		No UI	BNDW + WordPro		AFP, 3rd Party	WordPro
<b>Document Library</b>		No UI	BNDW	Domino		
<b>Text Search</b>		No UI, no update				
<b>Application Enabler</b>		No UI	BNDW			
<b>Data/Text Merge</b>		Fail	BNDM		3rd Party *	SmartSuite, 3rd Party



# Calendar Services

## Used For

- personal diaries, resource scheduling, jobs scheduling

## Effect of Withdrawal

- No function

## OS/400 Approach

- Use WRKJOBSCDE or AJS for job scheduling

## Notes/Domino Approach

- Notes calendars

## IBM EverGreen/400 Approach

- 5250 interface to Notes calendars



# Email & Distribution Services

## Used For

- Messages, Notes, Documents, To Do

## Effect of Withdrawal

- No UI
- No SNDDOC (but SNDDST OK)

## OS/400 Approach

- AnyMail/400 Mail Server Framework

## Notes/Domino Approach

- Notes Mail, Domino POP3

## IBM EverGreen/400 Approach

- 5250 'POP3' interface to Domino and AnyMail/400



# Document Library Services

## Used For

- finding documents and PC files by system and user descriptions

## Effect of Withdrawal

- Folders and descriptions are OS/400 function
- No UI to describe or search except by folder

## OS/400 Approach

- API still available

## Notes/Domino Approach

- IBM BlueNotes Document Warehouse (BNDW)
  - replicates descriptions to Notes
  - launches appropriate editors and viewers
- Lotus Domino.Doc
  - migrate via BNDW



# Text Search Services

## Used For

- finding RFT documents by searching pre-built index of text contents

## Effect of Withdrawal

- no text search index management, no UI

## OS/400 Approach

- [V5R1 DB2 UDB API's](#) - planned BlueNotes interface

## Notes/Domino Approach

- many options, not yet for existing RFT & FFT documents



# WP Editor & Dictionary Services

## Used For

- Creating, editing and printing documents. Spell check. Data/text merge.

## Effect of Withdrawal

- No UI. Very limited print function.

## Notes/Domino Approach

- Notes editor for new documents
- BNDW for AS/400 launches WordPro, Word, etc.

## IBM AFP Viewer Approach

- Free with CA/400. View FFT, image, fax, also spool.

## Lotus WordPro Approach

- Reasonable conversion of RFT and FFT documents. Better than other PC editors.



# Editor, contd.

## Third Party Approaches

- PC-based editors, e.g. MS Word
  - Check for filters.
- DTM for AS/400 from Inventive Designers
  - data merge tool has WP function



# Help Text

## Used For

- Creating and labelling Help Text with OV/400 editor. OS/400 DSPHLPDOC API to display by document or label.

## Effect of Withdrawal

- No update text editor which also retains labels

## Notes/Domino Approach

- Split labelled text to smaller documents (enables display without labels). Later cut and paste to Notes RTF.

## IBM AFP

- Recreate with AFP 'labels'. View from AFP Viewer.

## Lotus WordPro Approach

- Edit text but lose labels





# Data/Text Merge

## Used For

- Standard letters, address labels, reports
  - merging DB2/400 data or Queries with standard text, usually to print

## Effect of Withdrawal

- No function

## Notes/Domino Approach

- IBM BNDM for AS/400
  - BlueNotes Direct Messaging (was Data Merge)
  - Notes & Domino-based form letters, reports and statements
    - User and Developer options
    - Notes Rich Text Format, AFP support
    - Output to Notes documents (opt. reuse in Notes & Web applications)
    - Unified Messaging - one merge to print/email/fax/Web
  - Appropriate for Domino customers
  - [See Triangle Connectors for RPG/CL Domino integration](#)



# Data/Text Merge, continued

## IBM RPG & Advanced Function Printing

- Range of tools
  - AFP Utilities/400 - Print Format Utility
  - AFP Toolbox
  - Data Description Specifications
- Appropriate for address labels and fixed format letters
  - Full AFP function including bar codes, logos, overlays
  - limited text manipulation, no word wrap

## Lotus SmartSuite

- Client/server environment
  - ODBC connection to DB2/400, e.g. Client Access/400
  - Letters and labels with Lotus WordPro
  - Reports with Lotus Approach
- Appropriate for end user access and low volumes
  - easy to use



# Data/Text Merge continued

## Third Party Approaches

- Word
  - Microsoft, USA
- DTM
  - Inventive Designers, Belgium
- ITP
  - AIA, Netherlands



# Data/Text Merge Product Matrix

	Letter/ Label	Report	State ment	Text Incl.	File Join	Sort	Select	Ext. query	Inter- face	Merge /hr	Avail- ability	From
<b>OV/400</b>	Y	Y	Y	Y	Query	Query	Query	Query	5250	5K+	To EoL	IBM
<b>AFP</b>	Y	Y	N	N	N	N	Y	N	5250	N/A	Now	IBM
<b>Smart-Suite</b>	Y	Y	?	Y	Logical	?	?	N?	Client/ Server	10K+	Now	IBM
<b>BNDM</b>	Y	Y	Y	Y	Logical/ SQL	Logical/ SQL	Y	Logical /SQL	Notes	800K+	Now	IBM
<b>DTM</b>	Y	Y	Y	Y	Y?	Y?	Y?	Y?	5250/ Notes	N/A	Now	I-D
<b>ITP</b>	Y	Y	Y	Y	Y	Y	Y	Y	Client/ Server	16K	Now	AIA



# Directory, Distribution List, Nicknames

## Used For

- EMail addressing, corporate telephone directory. System shadowing.

## Effect of Withdrawal

- Not affected

## OS/400 Approach

- System Distribution Directory (SDD) is OS/400 function

## Notes/Domino Approach

- Domino Directory (DD)
- Domino for OS/400 synchronises SDD with DD [until Domino 6](#)
- [BlueNotes Dir Synch synchs USRPRF-SDD-LDAP and exports to DD](#)

## IBM EverGreen/400 Approach

- SDD and DD accessed from EverGreen/400 e-mail and calendaring



# Admin., Security & User Functions

## OV/400 Function

- Enroll users. Manage security of DLOs. Document Conversions. Launch of PC editors

## Effect of Withdrawal

- No enrollment (not required)

## OS/400 Approach

- Security is an OS/400 function

## Notes/Domino Approach

- Domino Administrator
- BNDW for PC application launch.



# Redbook Samples

## Samples

- most of the work on the Residency!

## Approach

- Show OV/400 worked example
- Show OS/400 alternatives
- Show Domino alternatives
- Show third party alternatives



# Samples Overview

Subject	Category : Subcategory	Version
OV/400 API Auditing	API Usage	OS/400 CL + Journal
OV/400 API Source scanning	API Usage	OS/400 CL + RPG
Add, search and change cal items	Calendar : Items	OV/400 CL
		Domino Java agent
		EverGreen/400 CL
Schedule jobs	Calendar : Job scheduling	OV/400 CL
		OS/400 CL
		Domino
Send message	Email : Email	OV/400 CL
		EverGreen/400 API
		Domino
Send document	Email : Email	OV/400 CL
		EverGreen/400 API
		Domino
Search & display document	DocLib & App Enab: search, display	OV/400 CL
		BNDW/400
Merge/print letters & data	WP/Editor : Data/Text/Merge	OV/400 CL
		DTM/400
		AFP
		Domino LS:DO
Help text	WP/Editor : Help	OV/400 CL + DSPF
		OS/400 UIM
		DTM/400
Formfill	WP/Editor : Formfill	OV/400 CL
		Domino LS:DO

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# IBM Network Stations

## Introduction

- Many customers with Non-Programmable Terminals will not want to move to a fully configured PC and Notes. The IBM Network Station may be a suitable alternative.

## Network Station Options

- 5250 Emulation to OS/400 or EverGreen/400
- Web browser to Domino plus a suite:
  - a) Lotus eSuite
    - Java-based word processing, email, calendar, spreadsheet, etc (a mini suite)
    - N.B. No current support in editor for RFT and FFT documents
    - No future development. Withdrawn from marketing.
  - OpenOffice suite (was StarOffice) for WP, spreadsheet and presentation. Run under Linux in OS/400 logical partition with X-Windows client on PC or NetworkStation.



# System/36 & System/38 Applications

## Introduction

- Not everyone has got to OV/400 yet. System/36 and /38 run the predecessor products. Migration to Notes is usually via OV/400.

## System/36

- DisplayWrite/36 and Personal Services/36
- Migration Tools to OV/400
- Save/restore folder options

## System/38

- Text Management/38 and Personal Services/38
- Migration Tools to OV/400



# IBM Applications and Tools

## Introduction

### Operating System/400, 5769-SS1

- The best operating system in the world. What more can I say?

### OS/400 Print Services Facility

- Feature of OS/400 for IPDS printers and fax.

### Application Development ToolSet for AS/400

- Historic standard set (DFU, SDA, etc)
- [Now Websphere family member](#)

### Advanced Job Scheduler, 5769-JS1

- Also base Job Scheduler in OS/400



# IBM Applications and Tools, contd.

## **AFP Workbench**

- PC tools to create overlays, view AFP, print to AFP

## **Advanced Function Printing Utilities, 5769-AF1**

- Create overlays & page segments. Licence only required for design.

## **Advanced Function Printing PrintSuite, 5798-AF3**

- Reformat print output, etc

## **Domino Fax for iSeries, 5733-FXD**

- Fax from Domino and Windows apps

## **Language Dictionaries, 5716-DCT**

- Spell check and synonym aid



## **IBM Applications and Tools, contd.**

### **Client Access/400 Family, 5769-XW1**

- file and print serving, data transfer, 5250 emulation, development tools and more

### **Facsimile Support for AS/400, 5798-TBY**

- send and receive fax including PC. Adapter, modem or PC.

### **Business Graphics Utility for AS/400, 5769-DS1**

- design business graphics from DB2/400. Include in documents.

### **System/36 Migration Aid, 5727-MG1**

- Migrate DW/36 & PS/36 to OV/400

### **System/38 Migration Aid, 5714-MG1**

- Migrate TMS/38 & PS/38 to OV/400



## IBM Applications and Tools, contd.

### **IBM 5697-F08 OV/400 to Notes Migration Tools - Withdrawn**

- Migrated user mail and calendars
- Coexistence for calendars (LCCOV/400)

### **IBM 5620-FHM BlueNotes Document Warehouse for OS/400**

- Notes access to documents. Launch PC tools. Optional migrate.

### **IBM 5620-FHN BlueNotes OV/400 Conversion Tool**

- convert mail and calendars to documents

### **IBM BNDM for OS/400 (BlueNotes Direct Messaging)**

- Notes access to database. Data/text merge.

### **EverGreen/400, 5620-BQV**

- 5250 access to Domino mail and calendars.



# Lotus/Domino Applications

## Lotus Notes/Domino

- more function than I can fit on a foil

## Lotus SmartSuite

- WordPro, 1-2-3, Approach, Freelance, ScreenCam

## BlueOffice

- [Documentation on how to use on and with OS/400. Free with BNDW.](#)

## Lotus eSuite WorkPlace and eSuite DevPack

- Java-based mini-suite, free with IBM Network Station

## Lotus Domino.doc

- sophisticated document management application



# Actions

**Order the Redbook**

**Review your applications**

**Analyse your exposure**

**Review other plans for OV/400**

**Develop your strategy**

**Select partners**

**Get started - you haven't got long!**





# The IBM Redbook

## Title

- How to Replace OfficeVision/400 in Your Applications: Looking at Domino for AS/400 and AS/400 Alternatives, SG24-5406-00

## Ordering

- Web Site - free download
- EMail
- Telephone
- Fax

## Other Redbooks

- Lotus Domino for AS/400: Integration with Enterprise Applications, SG24-5345
- Lotus Domino for AS/400 R5: Implementation, SG24-5592



# More Information

## Web Sites

- IBM ITSO Redbooks
  - <http://www.ibm.redbooks.com>
- OfficeVision/400 to Lotus Notes Information
  - <http://www.dominodotoffice.com>
- Technical documentation
  - <http://www.ibm.com/support/techdocs>
- Mig Tools
  - <http://service2.boulder.ibm.com/nov/index.html>
- BlueNotes Product Family
  - <http://www.bluenotes.com>
- EverGreen/400 & DTM
  - <http://www.inventivedesigners.be>
- ITP
  - <http://www.aia.nl>

# More Information - Conference

## Related Conference Session

- DP02 Domino for iSeries - What's New?
- DP06 Domino and iSeries Integration with BlueNotes
- DP10 Domino for iSeries Tuning Tips
- DP16 Multi-version Capable Releases for Domino for iSeries
- DP13 Using LEI 6 to Integrate Domino & DB2 UDB for iSeries
- DP18 Notes from the Beach
- plus
  - development tools sessions



# Questions?

**While you are thinking of questions....**

**Evaluation Forms please**