

Document Generation System

Document Generation System - 1

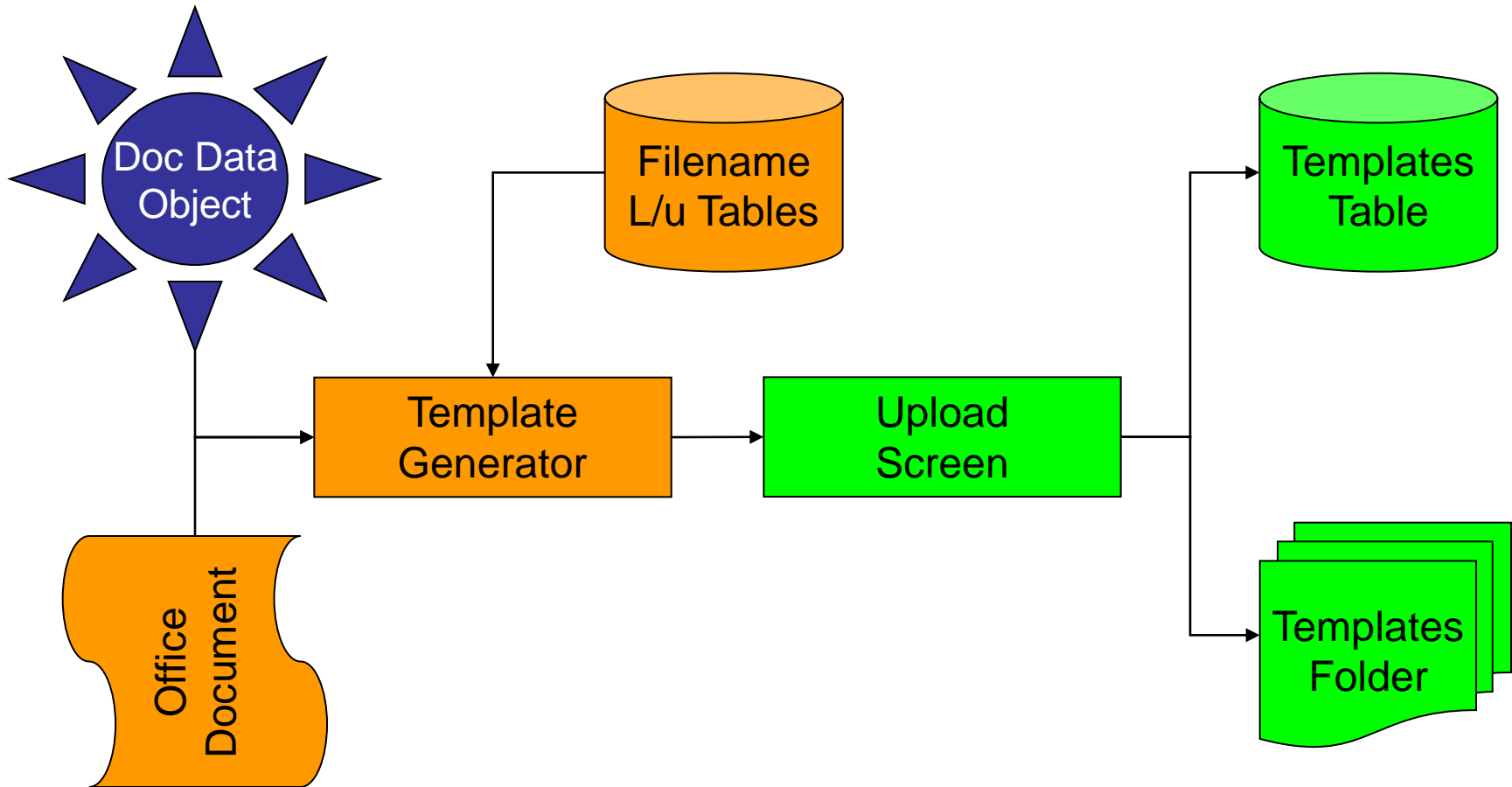
- ❑ This document provides the outline specification for the electronic **Document Generation System**.
- ❑ The front-end Web application accesses **Document Templates** (Microsoft Word ML format) that contain placeholders for binding to data contained in the data tables. The data tables stored in the business application are accessed to populate a **Document Object** that is bound automatically to a selected template to produce the relevant PDF document. The production of the Document Object definition and the data “extraction” requires some custom development.
- ❑ **Document Templates** are prepared using a **Template Generator**. This uses Microsoft Word (2010, 2007 or 2003 SP2) and a specially developed **Document Object** “add-in” that provides a pop-up window that contains all the **Document Object** fields, with collapsible/expandable nodes, that can be dragged and dropped onto the **Document Template** as placeholders, as required. Collections . . . e.g. named drivers, etc. . . . are handled by one placement. A **Document Generator** (see later) takes care of their sequential placement.

Document Generation System - 2

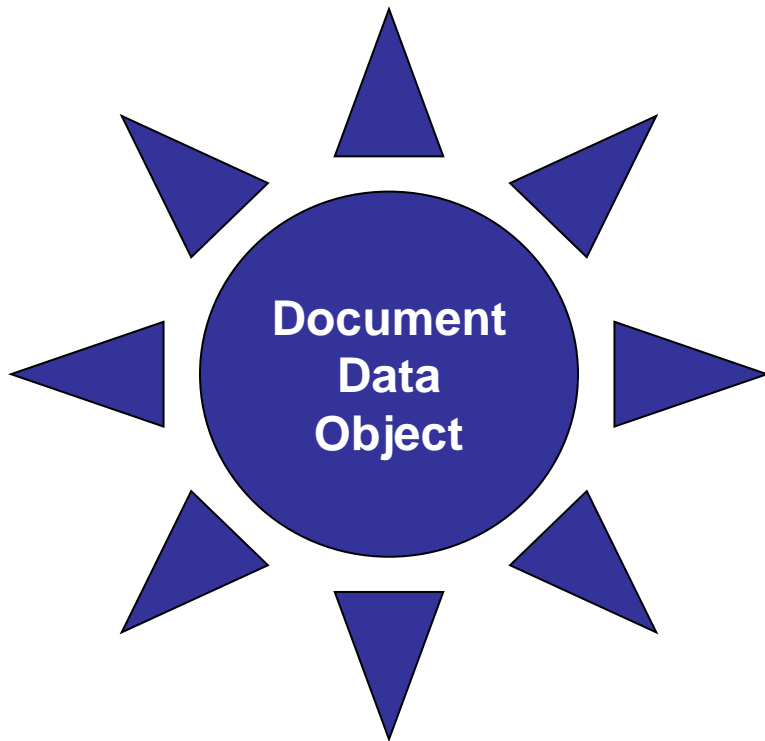
- ❑ An operator with the necessary Microsoft Word skills can use the **Template Generator** to develop **Document Templates**.
- ❑ **Document Templates** are uploaded to the Web application servers using a file upload screen, and the start and end dates are selected. The Web application servers can store a maximum of 2 versions of a template - current and one future.
- ❑ Each **Document Template** is developed for a specific purpose and contains no internal processing logic, **although “If Then Else” document nodes can be used for conditional display**.
- ❑ The Web application searches for the template(s) that are relevant to the operation being performed . . . as defined by its status. E.g. Quotation, New Policy, MTA, etc. It will then retrieve the **Document Object** and generate all documents by binding the **Document Object** to each **Document Template** retrieved in turn using the **Document Generator**. The documents can be “stitched” together consistent with the type of printer used . . . i.e. full duplex or half duplex. This avoids interleaving of documents on busy printers.
- ❑ Generated documents can be downloaded, printed and/or emailed.

Document Generation System

Templates Generation, Upload and Storage



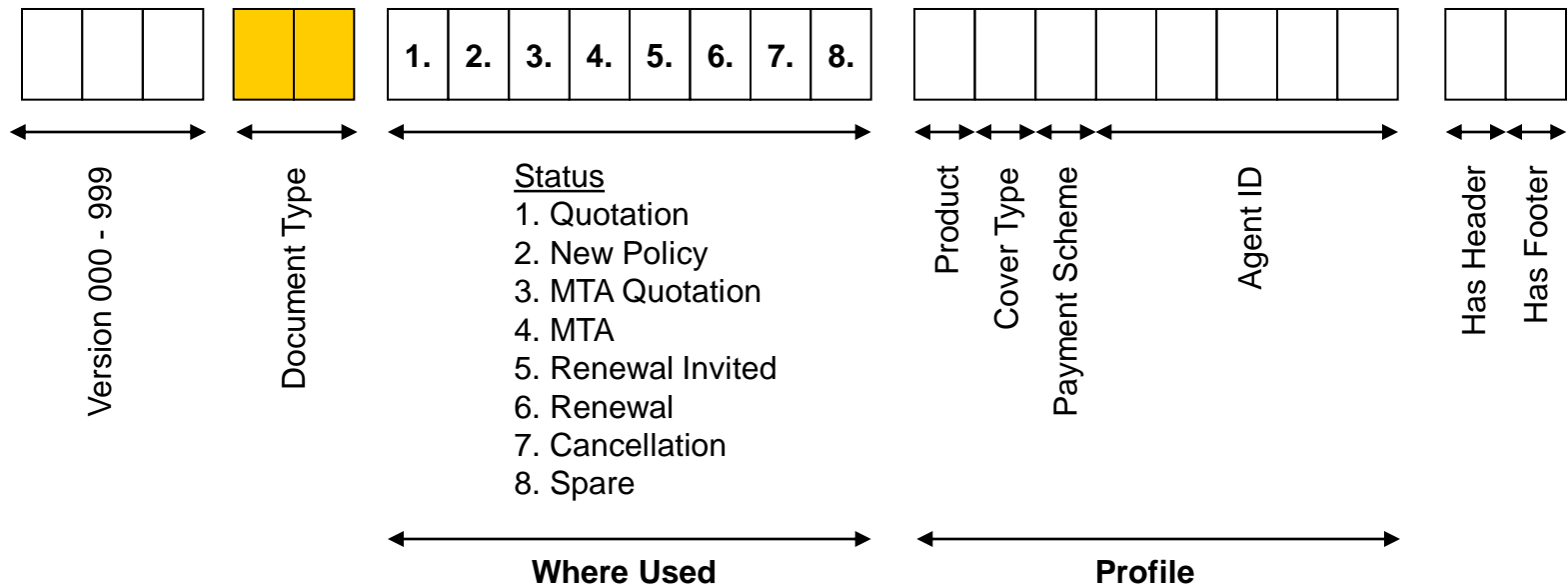
Document Data Object



- ❑ Specific to the application and product or service.
- ❑ Basically, defines an interface class containing all the properties ever likely to be required for document generation for a specified product, for example (insurance):
 - Broker data
 - Policy data
 - Payment data
- ❑ Used to create placeholder links in **Document Templates** (developed using the **Template Generator**) and to “marry” the selected template with the relevant database content (using the **Document Generator**).

Document Templates

- ❑ Applicability of a **Document Template** is encoded in its file name.
- ❑ A typical template filename format is shown below. This is assembled dynamically by the **Template Generator** and accessed by the **Document Generator**. Templates are Word ML format and generated documents are PDFs.
- ❑ An example template file name format is shown below (insurance).



Document Examples

Example **Document Types** (insurance):

- Quotation Pack . . . collection of documents printed as one.
- Cover Note.
- Certificate.
- New Business Pack . . . collection of documents printed as one.
- Renewal Pack . . . collection of documents printed as one.
- Adjustment Pack . . . collection of documents printed as one.
- Cancellation Pack . . . collection of documents printed as one.

The **status** characters define at what stages a **Document Template** is used. A template could be used at multiple stages.

A set of attributes defines the template **profile**, simplifies templates creation and eliminates the need for dynamic customisation of documents . . . but does increase the number of templates required.

Root: Item (Field CurrentUserInitials)) . Item (Field SystemDate)) Item (Field SystemTime))

BROKER PARTNER CASE PREMIUM PAYMENT OPTIONS

Please select payment option by ticking appropriate box and completing relevant details below.

- All cheques should be made payable to Motor Trade Solutions Ltd
- Cover Note/Certificate can be released once all documents and payments have been received
- Defaulted payments will result in the full outstanding balance becoming immediately due
- In the event of a claim the full outstanding balance is due immediately

Please tick as appropriate

Name:

Item (Row Item ITE
TruePart (Item Field Company
))) FalsePart (Item Field F
ullName)))))))

Our Ref:

Item (Field PolicyNumber))

Policy No:

Item (Field InsurerPolicyRef))

Payment enclosed for the Full Premium of c. Item (Field TotalPremium)) (cheque enclosed)

Please charge my Credit/Debit Card with the Full Premium of c. Item (Field TotalPremium)) . You must call us to provide the Card details. For your security, we do not ask for this in writing.

3 Monthly Instalments *(Instalments will be due when cover is given and monthly thereafter)*
(Payable by credit/debit card. Please call us to provide details.)

1st Instalment

€ Item (Field T
hreeInitialInstalmen
tAmount))

2nd Instalment

€ Item (Field Three
InstalmentsAmount))

3rd Instalment

€ Item (Field Three
InstalmentsAmount))

6 Monthly Instalments *(Instalments will be due when cover is given and monthly thereafter)*
(Payable by credit/debit card. Please call us to provide details.)

Deposit

€ Item (Field Six
InstalmentsDeposi
t))

2nd Instalment

€ Item (Field SixIn
stalmentsAmount))

3rd Instalment

€ Item (Field SixIn
stalmentsAmount))

4th Instalment

€ Item (Field Six
InstalmentsAmou
nt))

5th Instalment

€ Item (Field SixIn
stalmentsAmount))

6th Instalment

€ Item (Field SixIn
stalmentsAmount))

FGOS Document ...

Test Generate Template Name C

Premium
AdminFee
BrokerCommissionAmount
BrokerCommissionPercentage
BrokerPremium
CarxAdminFee
CarxBrokerCommissionClawBack
CarxInstalmentFee
CarxIPTAmount
CarxPremiumB4AddOns
CarxPremiumB4IPT
CarxTotalBrokerPremium
CarxTotalPremium
Deposit
FirstInstalment
InstalmentTotalAmount
IPTAmount
IsMTAReturn
MTAAdjustment
MTAAdjustmentB4AddOns
MTAAdjustmentB4IPT
MTABrokerPremium
MTAIPAmount
OtherInstalments
PaymentPlan
PremiumB4AddOns
PremiumB4IPT

Find

Find

Find

Administrator's Template Upload Screen

View Templates  New Template

Start Date *

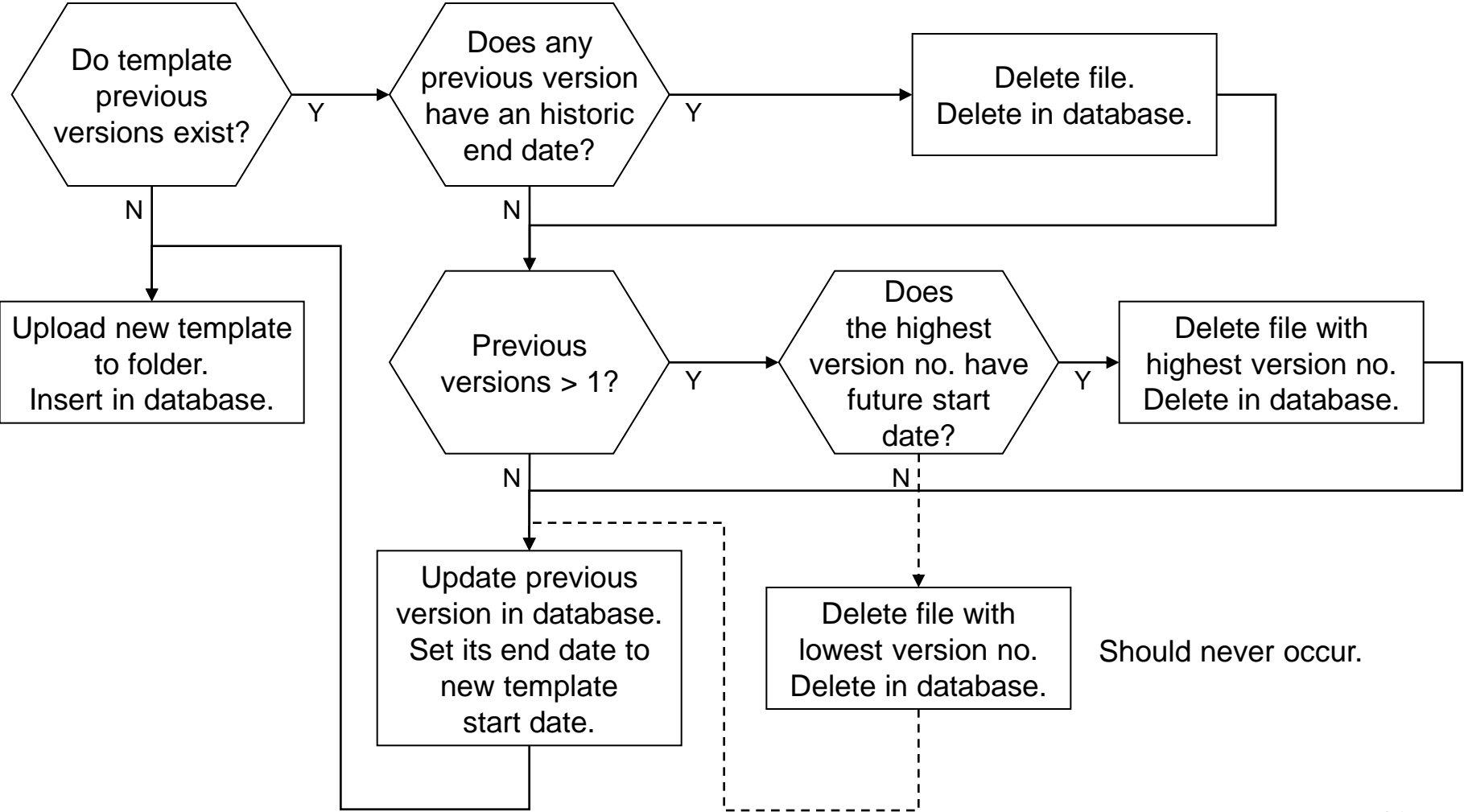
End Date

File Name *

Required fields are denoted by *.

Template Upload Flowchart

(all with transaction rollback)



Templates Database Table

(example)

Version No.	File Name	Attributes (<u>multiple columns</u> incl. specificity)	Start Date	End Date	Created By
001	xxxxxxxxxxxx		01/01/2010	31/10/2012	John Smith
002	xxxxxxxxxxxx		01/12/2007	<NULL>	John Smith
002	yyyyyyyyyyyy		01/10/2009	03/09/2011	Janet Doe
003	yyyyyyyyyyyy		04/09/2009	<NULL>	Janet Doe
006	zzzzzzzzzzzz		03/04/2009	<NULL>	Janet Doe

Example File Name: 007CENYNYNYNMAA12345YY.XML

View Template

Document Type

Select

Insurer

Select

Go

Delete	Edit	Upload Edited Template	Description	Start Date	End Date	Created By	
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - Accounting Letter	OMAIAANN	Default Letter - Refer to Payer L061-1 (DD)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - DD Confirmation Letter	ORAIAANN	Default Letter - Refer to Payer L061-1 (DD)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - DD Default Letter	OMAIAANN	Default Letter - Refer to Payer L061-2 (DD)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - DD Instruction Covering I	ORAIAANN	Default Letter - Refer to Payer L061-2 (DD)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - DD Withdrawn Letter	OMAIAANN	Default Letter - Refer to Payer L061-3 (3/6)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - DD Withdrawn Letter Che	ORAIAANN	Default Letter - Refer to Payer L061-3 (3/6)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - DDM Canelled Request Re	OMAIAANN	Default Letter - Refer to Payer L061-4 (3/6)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - Notification of DD Paymer	ORAIAANN	Default Letter - Refer to Payer L061-4 (3/6)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - Overdue DDM	OMAIAANN	Termination Letter (L081)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - Overdue Final Warning	ORAIAANN	Termination Letter (L081)	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - Overdue Warning	OMAIAANN	Default Letter - Instruction Cancelled L062	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - Terms and Conditions	ORAIAANN	Default Letter - Instruction Cancelled L062	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Acc - Utilising Holding Deposit	OMAIAANN	Default Letter - Account Closed Transferred L063	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Adjustment Schedule	ORAIAANN	Default Letter - Account Closed Transferred L063	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Broker Provisional Renewal Acc	OMAIAANN	Default Letter - No Account Held L064	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Cancellation Enclosure Letter	ORAIAANN	Default Letter - No Account Held L064	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Cancellation Schedule	OMAIAANN	Default Letter - No Instruction Held L065	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Certificate	ORAIAANN	Default Letter - No Instruction Held L065	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Claim Info Request Letter	OMAIAANN	Default Letter - Request for new DDI L066	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Claim Memo	ORAIAANN	Default Letter - Payment Reclaimed - No Instruction Held L068	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Company Car Proof Request Le	OMAIAANN	Default Letter - Payment Reclaimed - No Instruction Held L068	01/06/2010	sthas
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Cover Note	ORAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Credit Authorisation Request	OMAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 DD Warning Letter	ORAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Default Letter - Account Closed	OMAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Default Letter - Instruction Can	ORAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Default Letter - No Account Held	OMAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Default Letter - No Instruction H	ORAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	0 Default Letter - Payment Reclai	OMAIAANN			
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D5YYYYYYYYYNYNNNNAAA0000ORAIAANN				
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D6YYYYYYYYYNYNNNNAAA0000OMAIAANN				
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D6YYYYYYYYYNYNNNNAAA0000ORAIAANN				
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D7YYYYYYYYYNYNNNNAAA0000OMAIAANN				
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D7YYYYYYYYYNYNNNNAAA0000ORAIAANN				
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D8YYYYYYYYYNYNNNNAAA0000AAIAANN				
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D9YYYYYYYYYNYNNNNAAA0000OMAIAANN				
<input type="checkbox"/>	<input type="checkbox"/>	upload	001D9YYYYYYYYYNYNNNNAAA0000ORAIAANN				

View Templates

User Name

Bill Smith

Date and Time

07/03/2006 10:54

Role

Admin

Type

New Business Pack ▼

Product

Master Tradesman ▼



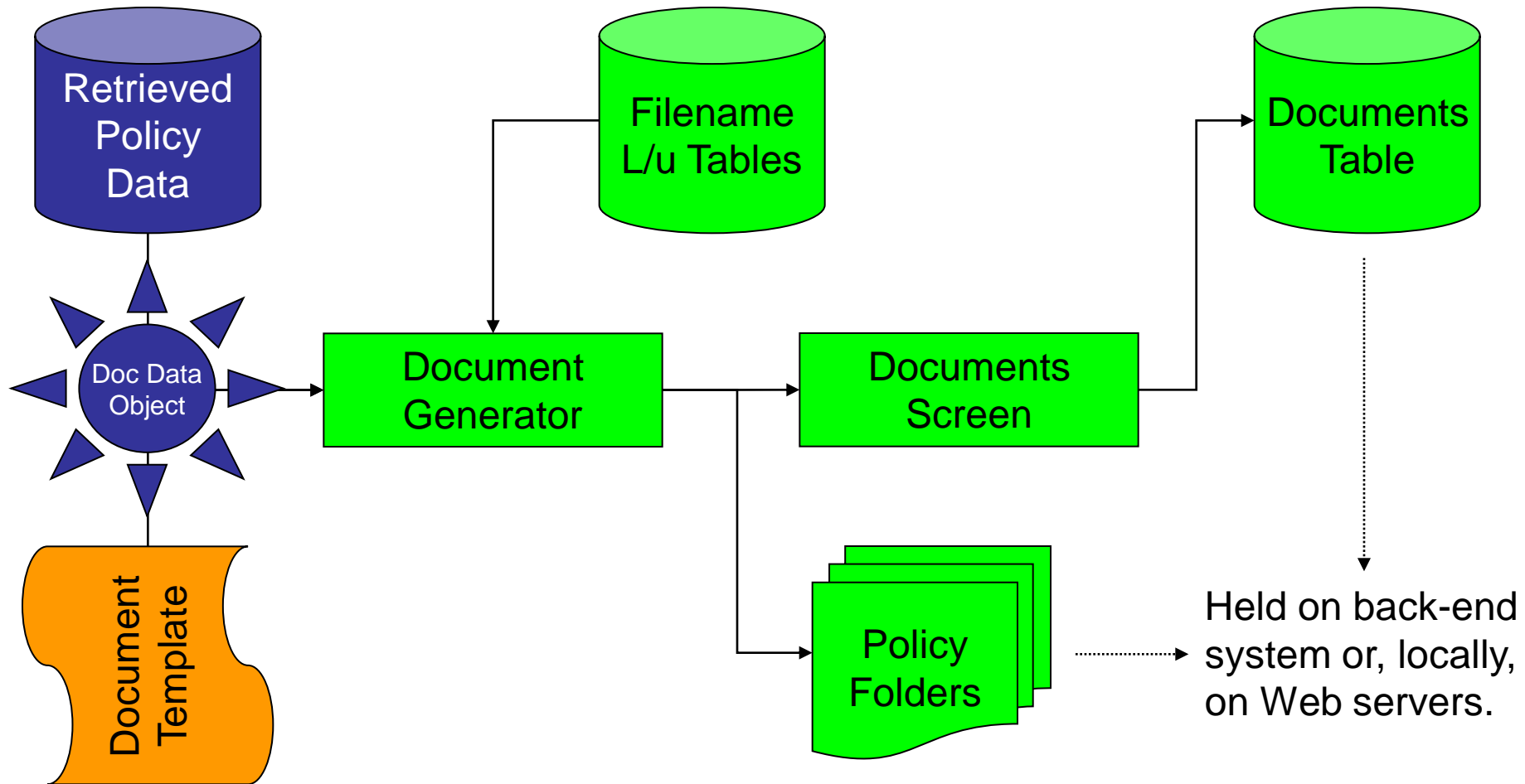
Version No	File Name	Start Date	End Date	Created By
001	001CNNYNYNYNNMAA12345YY.PDF	01/01/2011	01/01/2012	John Brown
007	007CENYNYNYNNMAA12345YY.PDF	01/01/2011	01/01/2012	Bill Oddie
003	003NPNYNNNNNNMAA12345YY.PDF	01/01/2011	01/01/2012	Bill Oddie

↓ Click for sort.

- Default sorting is in descending order of Product, Document type, Version No.

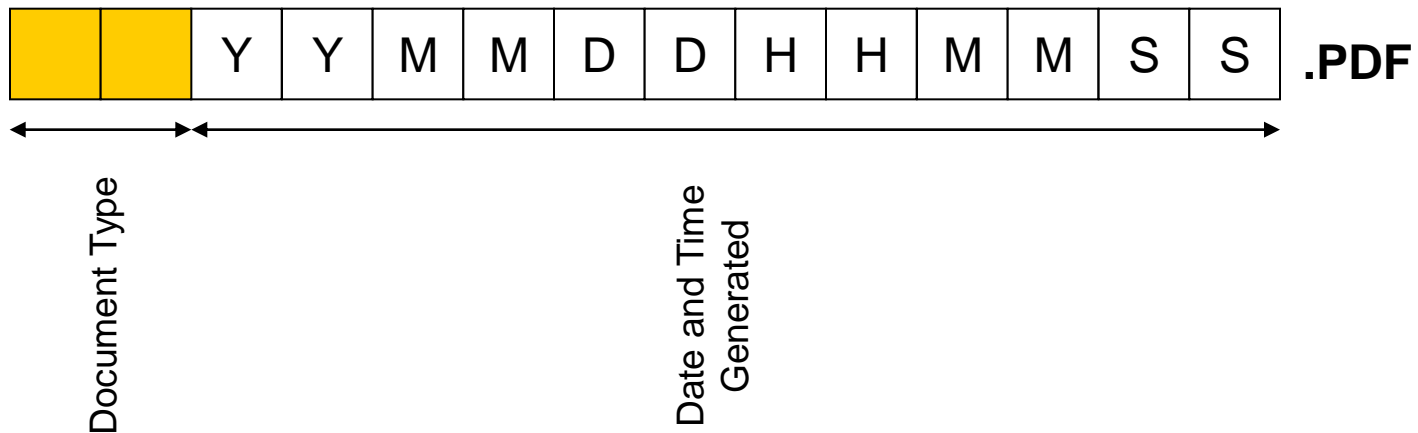
Document Generation System

Document Generation



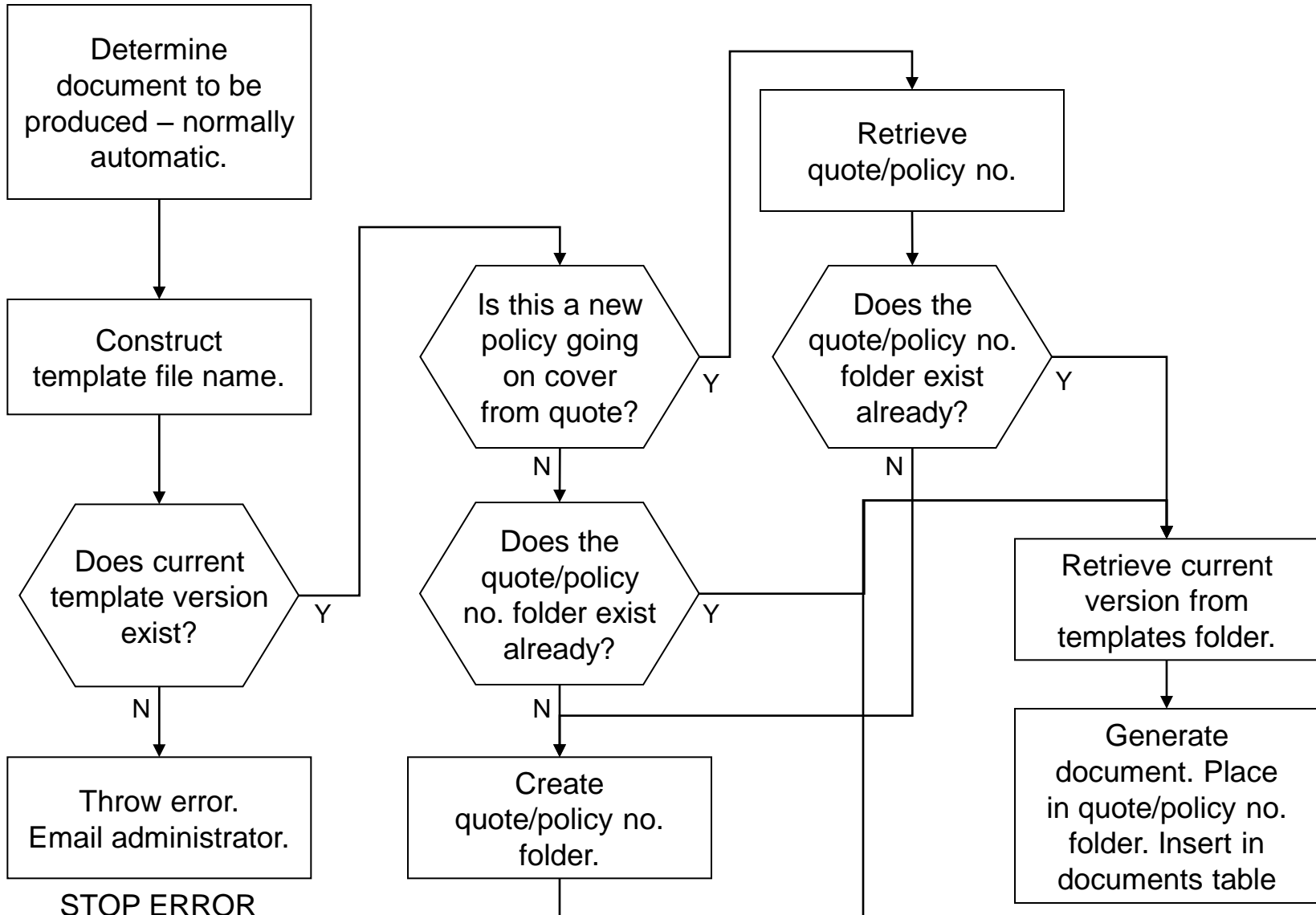
Document Generation

- ❑ All documents are generated as PDFs. Generated documents can be stored on a back-end system OR on both the Web application servers and a back-end system if rapid access via a Web interface is required.
- ❑ All documents are stored initially in user specific folders and transferred to the back-end system via FTP. They are catalogued by the Web application in an optimised and indexed table that can contain millions of records.
- ❑ If **generated documents are stored in specific folders per user**, the file name format can be, simply, the document type and date and time of creation:



Document Generation

(example – all with transaction rollback)



STOP ERROR

Documents Database Table

(example)

Policy No.	Document File Name	Document Type	Date Created	Created By
OS-1008-24570	CE060503120045.PDF	CE	06/03/2011 15:00:00	System
OS-1211-23560	CE060503120050.PDF	CE	06/03/2011 12:00:00	John Doe
OS-1211-23560	CN060503120055.PDF	CN	05/03/2011 12:00:00	System
HL-1008-12115	NP060503120056.PDF	NP	03/03/2011 15:00:00	John Doe
HL-1008-12115	CE060503120058.PDF	CE	03/03/2011 14:00:00	John Doe


Example File Name: CEYYMMDDHHMMSS.**PDF**

Document Retrieval





(operator interface)

- ❑ Once enabled for external use, rules will be applied controlling what an external operator can do. For example: Certain rules may allow the viewing of certificates but inhibit the printing of certificates unless an operator has sufficient privilege; certain rules may govern, also, the validity period allowed for cover notes.
- ❑ A table defines, for each product or service, what document types get automatically generated at each application stage.
- ❑ The templates visibility is coded in the filename and determines what templates are available for manual generation at the different application stages.
- ❑ A facility is provided to display and retrieve all existing (generated) documents for a specific user . . . and can be filterable by “Show All” and “Show Current Year”, for example.

Documents Generation

Documents	
 Existing Documents	<input type="checkbox"/> Intro Letter
	<input type="checkbox"/> Cover Note
New Documents	<input type="checkbox"/> Certificate
	<input type="checkbox"/> New Business Pack
	<input type="checkbox"/> Direct Debit Form
	<input type="checkbox"/> Credit Control Letter
View	
Print	
Email	

Document Retrieval - Existing

Documents				
 Existing Documents	File Name	Created Date	Created By	Doc. Type
	 New Documents	<input type="checkbox"/> CE060530123045.PDF	22/02/2006 08:17	System
	<input type="checkbox"/> NP060530123050.PDF	20/01/2006 12:15	System	New Pack
	<input type="checkbox"/> CN060530123055.PDF	02/01/2006 14:07	System	Cover Note
	<input type="checkbox"/> IL060530123115.PDF	02/01/2006 14:06	Bill Smith	Intro Letter
 View				
 Show All				
 Current Policy Year				