

*inter*Media for Web Oriented Content Management: Getting Started

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Core Paradigm





Agenda



- interMedia Overview
- interMedia Multimedia data
- interMedia Web Agent Overview
- An interMedia - PL/SQL cartridge sample application



interMedia Services, Components, Options, “Oh My”



- Tools and data integration in support of Web access to multimedia / complex datatypes
- Locator
- Text
- Multimedia
 - Types
 - Tools



If you think it's interMedia, but it's not...



- Options, not interMedia Components
- Spatial
- Time Series
- Visual Information Retrieval



Locator

- Supports on-line internet-based geocoding facilities
- Distance based queries

Text



- interMedia Text = upward migration from Context
- Text search engine tightly integrated into database
- Better Performance and easier use
- White Paper: *Text Management with Oracle interMedia: Managing Text and Multimedia Content with Oracle8i.*



Multimedia: Types

- Types are owned by ORDSYS user
- Audio: data such as .aif and .wav files
 - ORDAudio
- Image: data such as .gif and .tif
 - ORDImage
- Video: data such as .avi and .mov
 - ORDVideo
- Source: defines database storage for all of the types
 - ORDSource



Multimedia: Tools



- Annotator
- Clipboard
- Web Agent

Annotator Screen



file:C:\WINNT\Media\Utopia Asterisk.WAV

Attributes Samples

Attribute Name	Attribute Value
MEDIA_SOURCE_FILE_FORMAT	Wave File Format
MEDIA_SOURCE_MIME_TYPE	audio/x-wav
MEDIA_SOURCE_FILENAME	Utopia Asterisk.WAV
MEDIA_SOURCE_DIRECTORY	C:\WINNT\Media
MEDIA_SOURCE_PROTOCOL	file
MEDIA_SOURCE_URL	file:C:\WINNT\Media\Utopia Asterisk.WAV
MEDIA_FORMAT_ENCODING	Microsoft PCM Wave Format
MEDIA_SIZE	95708
AUDIO_NUM_CHANNELS	1
AUDIO_SAMPLE_RATE	22050
AUDIO_BITS_PER_SAMPLE	16

Console

```
Start parsing of <file:C:\WINNT\Media\Utopia Asterisk.WAV> ...  
URL <file:C:\WINNT\Media\Utopia Asterisk.WAV> parsed correctly.
```

100% Done



Annotator

- Start with annotator.bat

```
ORACLE_HOME/ord/annotator/annotator.bat (sh)
```

- Using JDK 1.2.x is easier

- Exported XML

```
<?xml version="1.0"?>
<!-- Generated by Oracle interMedia Annotator 1.0 -->
<AudioAnn
  dt="oracle.ord.media.annotator.annotations.AudioAnn"
>
<Attributes>
  <MEDIA_SOURCE_FILE_FORMAT desc="Media file format" ...>
  </MEDIA_SOURCE_FILE_FORMAT>
</Attributes>
</AudioAnn>
```



Clipboard

- Use for Client/Server (Windows) access to multimedia types
- Use for generating template Web Agent code
- Open with:
 - Non-Oracle8i Client
ORACLE_HOME/bin/wscclip.exe
 - Oracle8i Client
Start Menu->Programs->Oracle->interMedia
- Default Logon agents/list
- Must first install the Web Agent and run
ORACLE_HOME/ord/web/admin/ordwebutl.sql

Clipboard Screen



interMedia Clipboard - PRODUCT

File Edit View Table Window Help

PRODUCT

PRODUCT_ID	PRODUCT_ID	DESCRIPTI...
	104360	DUNK HOOP
	104361	DUNK HOO...
	104362	DUNK NETS...
	105123	YELLOW JE...
	105124	YELLOW JE...
	105125	YELLOW JE...
	105126	YELLOW JE...
	105127	YELLOW JE...
	105128	YELLOW JE...
	200376	SB ENERGY...

For Help, press F1

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Adding an interMedia Type Column



```
ALTER TABLE product
  ADD (product_img ORDSYS.ORDImage) ;
```

Name	Null?	Type
-----	-----	-----
PRODUCT_ID	NOT NULL	NUMBER (6)
DESCRIPTION		VARCHAR2 (30)
PRODUCT_IMG		ORDSYS.ORDIMAGE

Adding interMedia Column with Storage Definitions



```
ALTER TABLE product
  ADD (product_img ORDSYS.ORDImage
      DEFAULT ORDSYS.ORDImage
      (ORDSYS.ORDSource (EMPTY_BLOB () ,
                        NULL, NULL, NULL,
                        SYSDATE, 1
                        ) ,
      NULL, NULL, NULL, NULL,
      NULL, NULL, NULL
      )
  )
  LOB (product_img.source.localdata)
      STORE AS product_img_seg
      (TABLESPACE user_images
      STORAGE (INITIAL 100K NEXT 100K PCTINCREASE 0)
      CHUNK 32K NOCACHE NOLOGGING
      ENABLE STORAGE IN ROW
      ) ;
```

Web Agent



- Used for CRUD of complex datatypes via HTTP
- Multi-threaded for scaling
- Database agent
- Administration agent
- Common configuration file
 - `ORACLE_HOME/ord/web/admin/wsc.cfg`

interMedia Web Agent and URLs



- Mediagets/~mediagets
- Mediaputs/appmediaputs
- Associated procedures
- Path Information
- `http://loreena:80/intermedia/my_database_agent/mediaget/my_get_procedure/105123`
- `<IMG SRC =`
`"http://loreena:80/intermedia/my_database_`
`agent/mediaget/my_get_procedure/105123"`
`>`

Put Procedure →



- The Put procedure passes back:
 - The LOB locator if the value is stored internally
 - NULL for the LOB locator if the value is stored as a BFILE
 - URL or user-defined data storage type.
- For the full list of parameters see the Oracle Document *Using Oracle8i interMedia with the Web*.



✈ Put Procedure



```
CREATE OR REPLACE PROCEDURE wa_product_img_put
  (ord_procedure_path IN VARCHAR2,
   ord_content_blob OUT BLOB
  )
AS
BEGIN
  SELECT p.product_img.getContent()
     INTO ord_content_blob
  FROM product p
  WHERE product_id = ord_procedure_path
  FOR UPDATE;
END;
```

Set Procedure



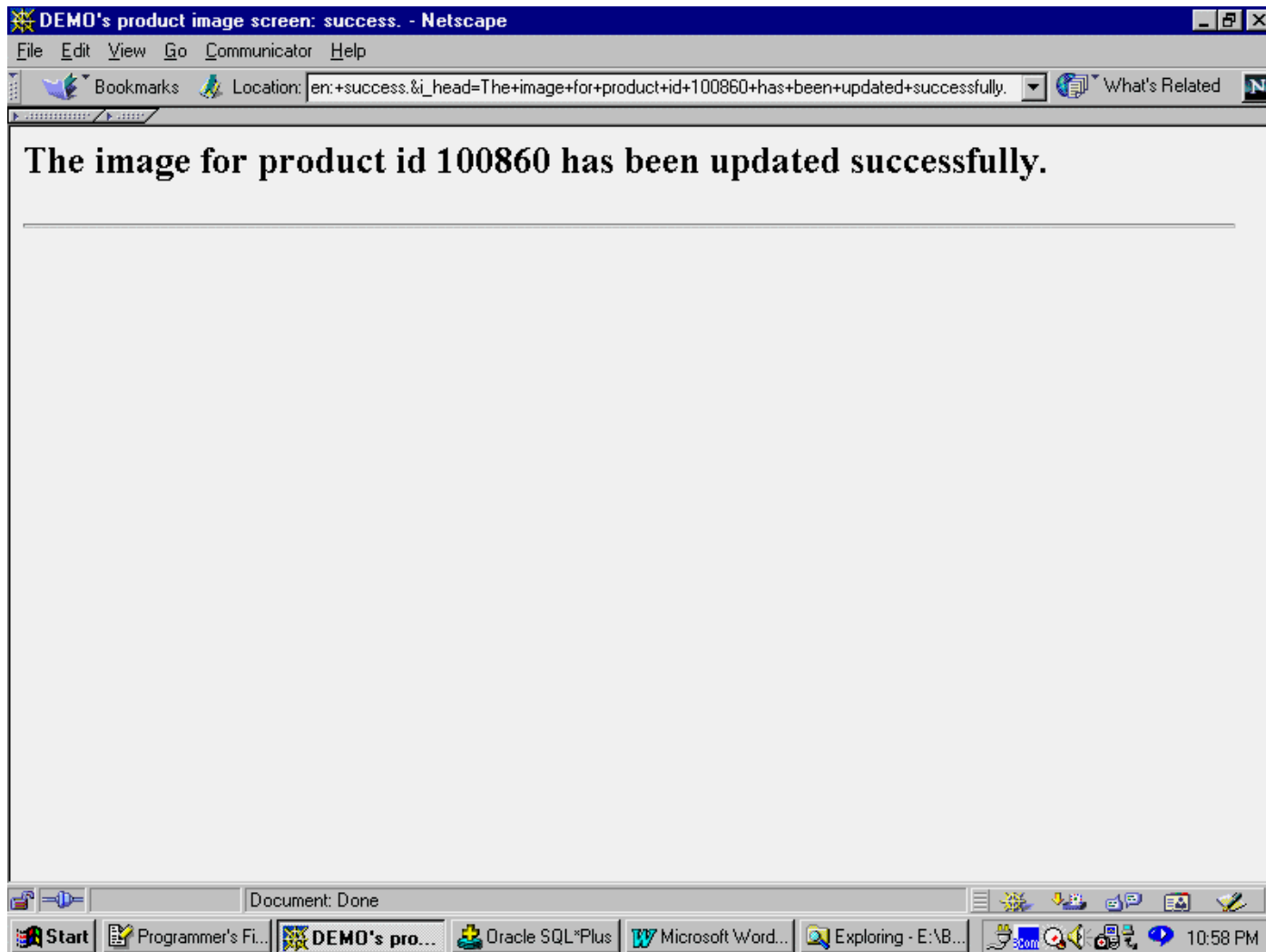
- The Set procedure populates the attributes of the ORDSYS.ORDImage column so that they are synchronized with the data value.

Code Review
wa_product_img_set.sql

A Default Result Screen



A Custom Set Result Screen



Get Procedure



- The Get procedure retrieves the multimedia object from the database.

Code Review
wa_product_img_get.sql

Application Using the PL/SQL Cartridge and the Web Agent



Code Review
product_img_app.sql

Demonstration

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- **Oracle8i Tips and Techniques**

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