

Digital File and Asset Exchange Systems

Summary and Abstract of Specification with Drawings.

Center Ring Integration System

A Digital File and Asset Exchange System.

Spot Depot

A Digital File and Asset Exchange Portal.

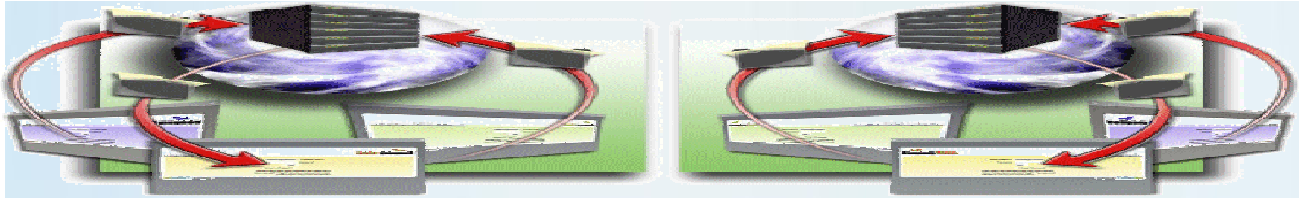
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Digital File and Asset Exchange Systems

The Center Ring Integration System

A Digital File and Asset Exchange System

- Digital exchange of media & metadata assets between unlike systems and systems that are not electronically or geographically connected.
- A rule based file transfer, translation, and conversion system that provides near real time exchange and synchronization of content.
- Graphics, Audio, Video, Documents, database update, Central Asset Warehouse exchange.
- An integral part of asset exchange, and forward movement in the ever-evolving technology of asset sharing, management, and distribution

abc RADIO NETWORKS
Welcome to ABC Spot Depot
The Digital Audio File Exchange Portal for ABC Radio Networks

LOGIN
username:
password:
 remember my username and password

abc FM NEWS
Introducing abc FM NEWS
Customized. Targeted. Relevant.

abc Sports Call ACCESS
sunday monday tuesday wednesday thursday friday saturday

Random Transaction:
Saturday, January 20, 2007
Sports Access A updated 09:31 AM ET
*Materials are last sound

ID	DOWNLOAD	NUMBER	WHO	SLUG	TYPE	HITS
01	<input type="checkbox"/>	7311	JOHN CLAYTON	CAMERON IMPRESSIVE	A	114
02	<input type="checkbox"/>	7314	JOHN CLAYTON	CAMERON HIRING	A	114
03	<input type="checkbox"/>	7315	PETER GANNONS	JEFF SAHARDOZJA	A	112
04	<input type="checkbox"/>	7318	PETER GANNONS	CBIS INVESTMENT	A	118
05	<input type="checkbox"/>	7316	MIKE BERRY	PHP '07 100-100	A	108
06	<input type="checkbox"/>	7350	JERRY SCHEINEL	PHP NUGGETS 54-57	A	115
07	<input type="checkbox"/>	7363	DAVID COOKE	PHP SONGS 54-55	A	112

abc RADIO NETWORKS Radio Programs

WELCOME TO THE AMERICAN COUNTRY COUNTDOWN ONLINE WEBSITE! - If you have questions on how to preview and download content from our site please check out the FAQ at the bottom of this page. To help you browse using this website:

Downloads: 20 new ZIP files

- Week #13: Week of January 15 (all files) Overalls: 6.83 MB
- Day Shows: File Size: 6.14 MB
- Previews: File Size: 4.14 MB
- Track 1: Track 01 File Size: 24.84 MB
- Track 2: Track 02 File Size: 27.24 MB

abc NEWS Newscall
sunday monday tuesday wednesday thursday friday saturday

Thursday, January 18, 2007
Last Update 11:17 PM ET

- ABC SportsCall #4 updated 11:17 PM ET
- ABC NewsCall #19 updated 11:02 PM ET
- ABC NewsCall #17 updated 11:08 PM ET
- ABC NewsCall #18 updated 11:08 PM ET
- ABC NewsCall #15 updated 07:41 PM ET
- ABC SportsCall #3 updated 06:41 PM ET
- ABC NewsCall #14 updated 06:42 PM ET
- ABC NewsCall #13 updated 06:51 PM ET
- ABC NewsCall #12 updated 06:52 PM ET

Central Asset Warehouse
Images | IP Assets | Audio | Data | Documents

Meta Data

Spot Depot

A Digital File and Asset Exchange Portal.

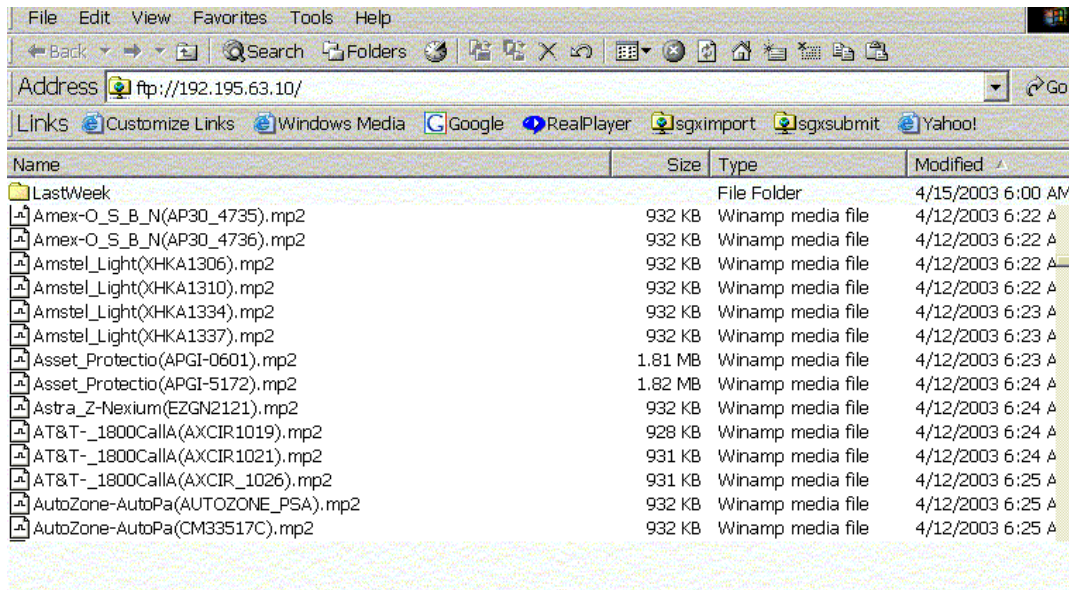
- Ushered in the digitalization of operations and the elimination of exchanging content via mailing or real time playback
- Preview, sort, and select content for download via zipped package or individual files.
- Set file deletion and file movement schedules, automated email notifications, file type filtering, greeting messages,
- Metadata based on XML and MOS.
- Responsible for the exchange of 60 to 80 thousand files per month.
- Spawned hundreds of other file and asset exchange services

Abstract

Because they are so closely integrated, this document will present and outline both the CENTER RING INTEGRATION SYSTEM and the SPOT DEPOT file exchange portal. Joe Curcio developed all systems described in his role as Engineering Project Manager for ABC Radio Networks and ABC Radio News, subsidiary operations of Disney.

Spot Depot

The SPOT DEPOT file exchange portal was developed and implemented between 2002 and 2003 for ABC Radio Networks (ABCRN). In its earliest rendition, SPOT DEPOT was a basic Internet FTP site, hosted by Disney, that allowed ABC Radio Networks to provide radio station affiliates, and related audio production entities the ability to electronically exchange short form audio commercial files. They were given access to retrieve and/or deposit audio content via the public Internet by using basic FTP software or a standard web browser such as Internet Explorer or Netscape. The system, although industrial in form at the time, ushered in the digitalization of the ABCRN commercial operation, and the elimination of exchanging audio content via mailing or real time playback of analog tape.

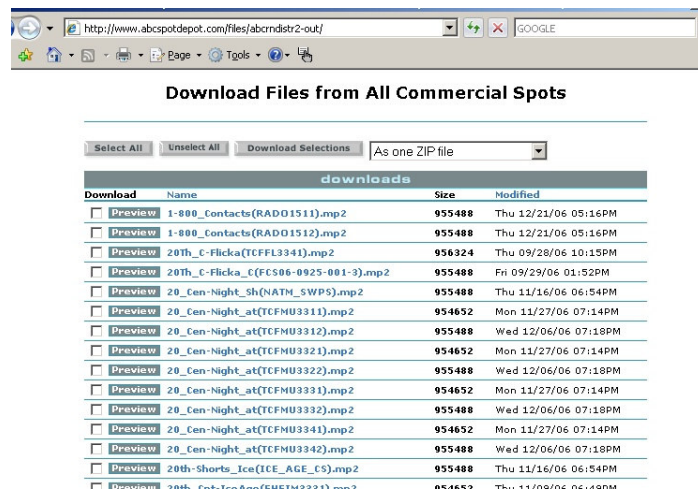


The screenshot shows an Internet Explorer browser window displaying an FTP site directory listing. The address bar shows 'ftp://192.195.63.10/'. The directory listing table has columns for Name, Size, Type, and Modified. The files listed are primarily MP2 audio files, with a 'LastWeek' folder at the top.

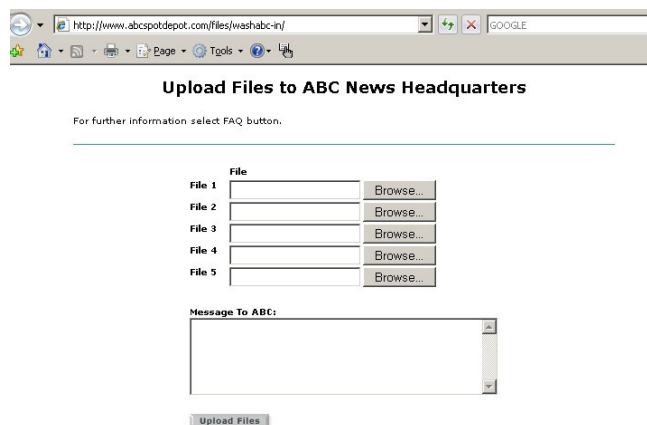
Name	Size	Type	Modified
LastWeek		File Folder	4/15/2003 6:00 AM
Amex-O_S_B_N(AP30_4735).mp2	932 KB	Winamp media file	4/12/2003 6:22 A
Amex-O_S_B_N(AP30_4736).mp2	932 KB	Winamp media file	4/12/2003 6:22 A
Amstel_Light(XHKA1306).mp2	932 KB	Winamp media file	4/12/2003 6:22 A
Amstel_Light(XHKA1310).mp2	932 KB	Winamp media file	4/12/2003 6:22 A
Amstel_Light(XHKA1334).mp2	932 KB	Winamp media file	4/12/2003 6:23 A
Amstel_Light(XHKA1337).mp2	932 KB	Winamp media file	4/12/2003 6:23 A
Asset_Protectio(APGI-0601).mp2	1.81 MB	Winamp media file	4/12/2003 6:23 A
Asset_Protectio(APGI-5172).mp2	1.82 MB	Winamp media file	4/12/2003 6:24 A
Astra_Z-Nexium(EZGN2121).mp2	932 KB	Winamp media file	4/12/2003 6:24 A
AT&T-_1800CallA(AXCIR1019).mp2	928 KB	Winamp media file	4/12/2003 6:24 A
AT&T-_1800CallA(AXCIR1021).mp2	931 KB	Winamp media file	4/12/2003 6:24 A
AT&T-_1800CallA(AXCIR_1026).mp2	931 KB	Winamp media file	4/12/2003 6:25 A
AutoZone-AutoPa(AUTOZONE_PSA).mp2	932 KB	Winamp media file	4/12/2003 6:25 A
AutoZone-AutoPa(CM33517C).mp2	932 KB	Winamp media file	4/12/2003 6:25 A

Further development of SPOT DEPOT allowed for the configuration of user management, security, and system redundancy. However, the most breakthrough of concepts was the ability to quickly configure Internet upload and download forms for the execution of uploading and downloading content without the use of the FTP protocol – a protocol that sometimes caused problems for users that were restricted by a firewall or other protocol blocking security system.

The dynamic creation of the download form used a created concept known as CONTENT OF DIRECTORY (COD). The COD concept dynamically displayed all files located in the associated website directory in a manner that permitted the user to preview, sort, and select content for download via zipped package or individual files.



Additional administrative configurations included the ability to set file deletion and file movement schedules; the sending of automated email notifications when a file was uploaded; file type filtering; greeting messages; graphics; and in another breakthrough concept, the generation of XML files that are associated with, and include metadata about the uploaded file.



Upload configuration GUI

Area Settings		[show help]
*Name	UPLOAD TO NETIA (FROM SPOT DEPOT NEWS)	[show help]
Storage Location	spotdepot	[show help]
*Directory	netia_fromspotdepotnews	[show help]
Type	Web Upload	[show help]
Style	Default	[show help]
View Order		[show help]

Area List Information		[show help]
Title	UPLOAD TO NETIA (FROM SPOT DEPOT NEWS)	[show help]
Description	Upload files to ABC New York & DC Netia system (Netia Category: "From Spot Depot News"). Please be sure	[show help]

Upload Area Information		[show help]
Top Message	Upload files to ABC New York & DC Netia system (Netia Category: "From Spot Depot News"). Please be sure	[show help]
Bottom Message		[show help]
Maximum files to Upload		[show help]
Allowed file extensions	.wav,.mp3,.mp2	[show help]

Notification email		[show help]
From address	spotdepotnotify11@abcspotdepot.com	[show help]
Send to	DL-ABCNRN.Spot.Depot.Notify.NewsHQ@abc.com	[show help]
Subject	Uploaded To Netia from Spot Depot	[show help]
Additional message	Please do not reply to this message. To retrieve file(s), please log into	[show help]

Receipt email		[show help]
From address		[show help]
Subject		[show help]
Additional message		[show help]

Copying Files		[show help]
Copy to download area	Every 15 Seconds	[show help]
	<input type="checkbox"/> except	

Mail Stripping		[show help]
Check for new mail	Never	[show help]

Resources		
Resources	Name	File
	Upload Resources	

XML		[show help]
XML Template	DAS/CRIS compliant XML	[show help]
XML Tags	Tag Value	[show help]

Metadata					[show help]
Label	Type	Required	Size	XML Tag	
TITLE	Per-file	Required	25	objSlug	
WHO	Per-file	Not Required	25	objWho	
OUTCUE	Per-file	Not Required	15	objOutCue	
TYPE	Per-file	Not Required	4	objCategory	
WRITE IN	Per-file	Not Required	100	objLead	
VERBATIM	Per-file	Not Required	100	mosAbstract	
COMMENTS (message)	Upload	Not Required	100	comments	
		Not Required			

Save Settings

Download configuration GUI

Area Settings		[show help]
*Name	DOWNLOAD (backup) for Netia FROM SPOT DEPOT NEWS	[show help]
Storage Location	spotdepot	[show help]
*Directory	netia_fromspotdepotnews	[show help]
Type	Web Download	[show help]
Style	Default	[show help]
View Order		[show help]

Area List Information	
Title	DOWNLOAD (backup) for Netia FROM SPOT DEPOT NEWS [show help]
Description	Download (backup) from files that were uploaded via the UPLOAD TO NETIA (NETIA CATEGORY: FROM SPOT DEPOT NEWS) section. [show help]

Download Area Information	
Top Message	Download (backup) from files that were uploaded via the UPLOAD TO NETIA (NETIA CATEGORY: FROM SPOT DEPOT NEWS) section. [show help]
Bottom Message	
Index File	
Entries Per Page	
Sort Order	
Vantive Code	
Show Days Before	
Show Days After	

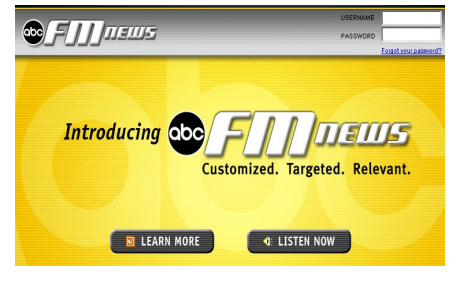
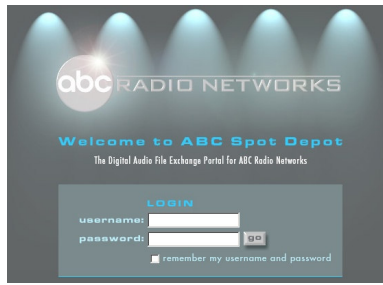
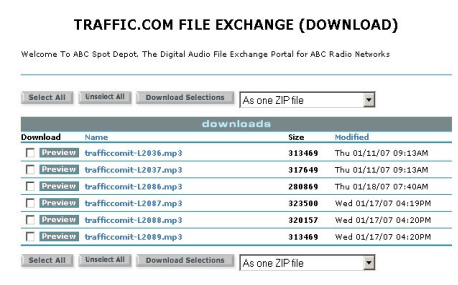
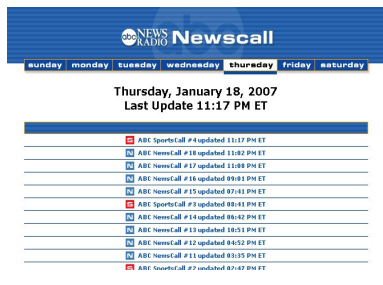
Area Cleanup		[show help]
Clean area	Every 3 Days at 12 : 00 AM	[show help]
Clean files	Older Than 3 Days	[show help]
Maximum size of directory	500M	[show help]
Protect files named		[show help]

Weekly Content Rotation	
Move contents to 'previous' directory	Never [show help]
Name of 'previous' directory	

Resources		
Resources	Name	File
	Upload Resources	

Today, the concepts and technology behind SPOT DEPOT are responsible for the exchange of 60 to 80 thousand files per month and have spawned hundreds of other file and asset exchange services including:

- *ABCNewsCall.com, ABCSportsCall.com, ABCFMNews.com* – Where radio stations can download news, sports, and long form program content.
- *Commercial Networks Distribution*– Where affiliated stations can download commercial audio files specific to their network affiliation including Sean Hannity, Doug Banks, ESPN, and Paul Harvey.
- *American Gold & Country Countdown* - Where affiliated stations can download long form country and popular music countdown programs.
- *ABC Production Library's* - Where affiliated stations can download audio production elements such as music beds, bumpers, features, and sound effects



Center Ring Integration System:

The CENTER RING INTEGRATION SYSTEM (CRIS) concept was developed in 2004 for the purpose of allowing the digital exchange of media assets between unlike systems and systems that were not electronically or geographically connected. Those systems, if CRIS compliant, would now be able to exchange files and assets as well as metadata (information about the file or asset). Systems that were not CRIS compliant could still exchange content and metadata via direct file transfer and/or via the SPOT DEPOT website.

The CRIS was partially implemented for the ABC Radio Networks (ABCRN) Digital Audio System (DAS) project starting in 2005. Joe Curcio was the Project Manager for the DAS project that was to replace the core audio production system for ABC Radio News. The following were amongst the systems that were not electronically or geographically connected until the CRIS system permitted the exchange of audio and metadata between them:

- ABCRN Commercial Production System
- ABCRN Dalet long form Production Network (CPN)
- ABCRN Washington DC Netia Production Network
- ESPN Bristol Connecticut ENCO Production System
- ABC Spot Depot website portal
- ABCNewsCall.com
- ABCSportsCall.com.
- ABCRN ADIS wire service.
- ABCRN Dcart Digital Audio Production System.
- ABC News AVID iNews system

.and more than 20 other exchange systems were connected through CRIS and CRIS related technology.

A rule based system:

The CRIS is a rule based file transfer, translation, and conversion system that provides near real time exchange and synchronization of content. Its basic metadata exchange language is based on standard XML and MOS markup language protocols. In its purest command instruction capability, it can instruct a system to ADD, MODIFY, DELETE, or SYNC an asset via its <status> tag instruction.

```
<?xml version="1.0" encoding="utf-8" ?>
- <mos>
  <ncsID />
  <mosID>SpotDepot</mosID>
- <mosObj>
  <created>2007-01-19T00:33:41</created>
  <changedBy>eprepdalpert@abcspotdepot.com</changedBy>
  <objID>d176e9ea-e564-4765-ba81-e4ae0d4b4570</objID>
  <objTB>1000</objTB>
  <objSlug>Isaiah washington apology</objSlug>
  <objType>AUDIO</objType>
  <createdBy>eprepdalpert@abcspotdepot.com</createdBy>
  <status>ADD</status>
  <changed>2007-01-19T00:33:41</changed>
  <objRev>1</objRev>
  <objDur>0</objDur>
  <description />
  <mosAbstract />
- <objPaths>
  <objPath>ftp://ftp.abcspotdepot.com/eprepdalpert-
    Isaiah_Washington_apology_wrap.mp3</objPath>
</objPaths>
- <mosExternalMetadata>
  <mosScope>OBJECT</mosScope>
- <mosPayload>
  <objDCartID />
  <objShowName />
  <objOutCute />
  <objWho>Dave Alpert</objWho>
  <objLocation />
  <objISCICode />
  <objOutCue>ABC News, Hollywood</objOutCue>
  <objCategory>W</objCategory>
  <objCutNumber />
  <objLead />
  <objClientName />
</mosPayload>
</mosExternalMetadata>
</mosObj>
</mos>
```

However, because the CRIS can serve both CRIS compliant and non-CRIS compliant systems, its exchange languages can vary from flat-file, comma delimited, or simple parsing of file names that include predetermined delimiters in the file name such as an underscore. Many aspects of the CRIS have not yet been implemented. However, the successful integration between the systems as noted, more than provides valid proof of concept.

The CRIS is best described by example and scenario. The following scenario refers to FIGURE 1 and will describe asset exchange between unlike systems that are not electronically or geographically connected:

	Site 1 Images	Site 2 Database	Site 3 Asset Warehouse
Business Function	Graphics producing	Central asset lookup database	Metadata and file asset warehouse
CRIS compliant	No	No	Yes
Location	London	New York City	Florida
File format	.GIF	.CSV	Various
File exchange method	Internet via ABCSpotDepot.com	Automated file retrieval by the central database site via FTP	Automated file retrieval by the asset system site via FTP
Metadata language	XML	Comma delimited text	XML

Scenario 1:

Images created in London are required to be stored in an asset warehouse in Florida and added to a searchable online database located in New York City.

The artist begins:

- The artist at the London site navigates to the ABCSpotDepot.com website, logs in, and is presented with an upload form

	File		Title	Key Words
File 1	<input type="text"/>	Browse...	<input type="text"/>	<input type="text"/>
File 2	<input type="text"/>	Browse...	<input type="text"/>	<input type="text"/>
File 3	<input type="text"/>	Browse...	<input type="text"/>	<input type="text"/>
File 4	<input type="text"/>	Browse...	<input type="text"/>	<input type="text"/>
File 5	<input type="text"/>	Browse...	<input type="text"/>	<input type="text"/>

- The artist uses the BROWSE button to select the image file from his local computer
- The artist enters the title and key words describing the image.
- The artist presses the upload button.

The CRIS takes over:

- A CRIS process generates an XML file that includes a <status>ADD</status> command, the title, key words, file name, and organization that performed the upload (based on who logged into the site)
- A CRIS process places the XML and image file into a predetermined location on Spot Depot
- A CRIS process consults the rules for the predetermined actions.
- A CRIS process determines that both the XML and image file are to be placed for access by two other systems.
- A CRIS process converts the XML file to a comma delimited text file with the .CSV file extension and copies it to a predetermined location for access by the *searchable online database system*.
- A CRIS process copies the XML and image files and places them in a predetermined location for access by the *asset warehouse system*.

The warehouse reaches out:

- A CRIS compliant process at the Asset Warehouse polls Spot Depot for content.
- A CRIS compliant process at the Asset Warehouse downloads both the XML and image files.
- A CRIS compliant process at the Asset Warehouse parses information from the XML file and adds it to its database
- A CRIS compliant process at the Asset Warehouse saves the image file to its local storage.
- A CRIS compliant process at the Asset Warehouse deletes the files from Spot Depot.

The database reaches out:

- A STANDARD AUTOMATED FTP RETRIEVAL process at the database facility polls Spot Depot for content.
- A STANDARD AUTOMATED FTP RETRIEVAL process at the database facility downloads then deletes the .CSV file from Spot Depot.
- A STANDARD DATABASE INGEST PROCESS at the database facility parses the information from the .CSV file and adds it to its database. The information includes the title of the work, keywords, and original location of the work.

	Site 4 Documents	Site 5 Audio-Video
Business Function	Document producing	Audio-Video production
CRIS compliant	No	No
Location	Washington	Connecticut
File format	.PDF	.MP3
File exchange method	Manual upload to CRIS via standard FTP	Automated file retrieval by CRIS
Metadata language	<i>Predetermined file name format</i>	Embedded in audio

File exchange scenarios are slightly varied for sites 4 and 5 in the above table:

- Site 4 performs a manual upload of the document directly to the CRIS site using a standard FTP client. A predetermined file name standard has been set that uses a triple underscore (___) as a metadata field delimiter. The following file name is an example using 3 metadata fields. The first for document title; the second for document identification number; and the third for document kill date:

Declaration of Independence___47812D6___20091231.pdf

- The CRIS system, as stated in one of its rules, polls its local directory for content delivered by the *document house*, parses the file name for metadata based the triple underscore delimiters, and distributes the files and associated metadata as required.
- Site 5 produces audio and video files and deposits them on their own FTP server. All metadata is embedded inside the file. The CRIS system, as stated in one of its rules, polls the FTP site for content and retrieves the file, reads and parses the embedded metadata, and distributes the files and associated metadata as required.

File synchronization is not discussed in detail in this presentation. However, as previously described, depending on the rules set in the CRIS, all sites are capable of issuing any one of four status commands (ADD, MODIFY, DELETE, SYNC). If the permission to use these commands is set in the CRIS rules base for a site, the command is executed by locating the asset based on the TITLE, and taking the action. Therefore, if the right is permitted, a TITLE deleted or modified in the New York database will be deleted or modified in the Florida database.

Both the CENTER RING INTEGRATION digital file and asset exchange system, and the SPOT DEPOT digital file and asset exchange portal do require further refinement and development. However, both systems have proven to be an integral part of asset exchange, and forward movement in the ever-evolving technology of asset sharing, management, and distribution for ABC Radio Networks and other Disney related operations.

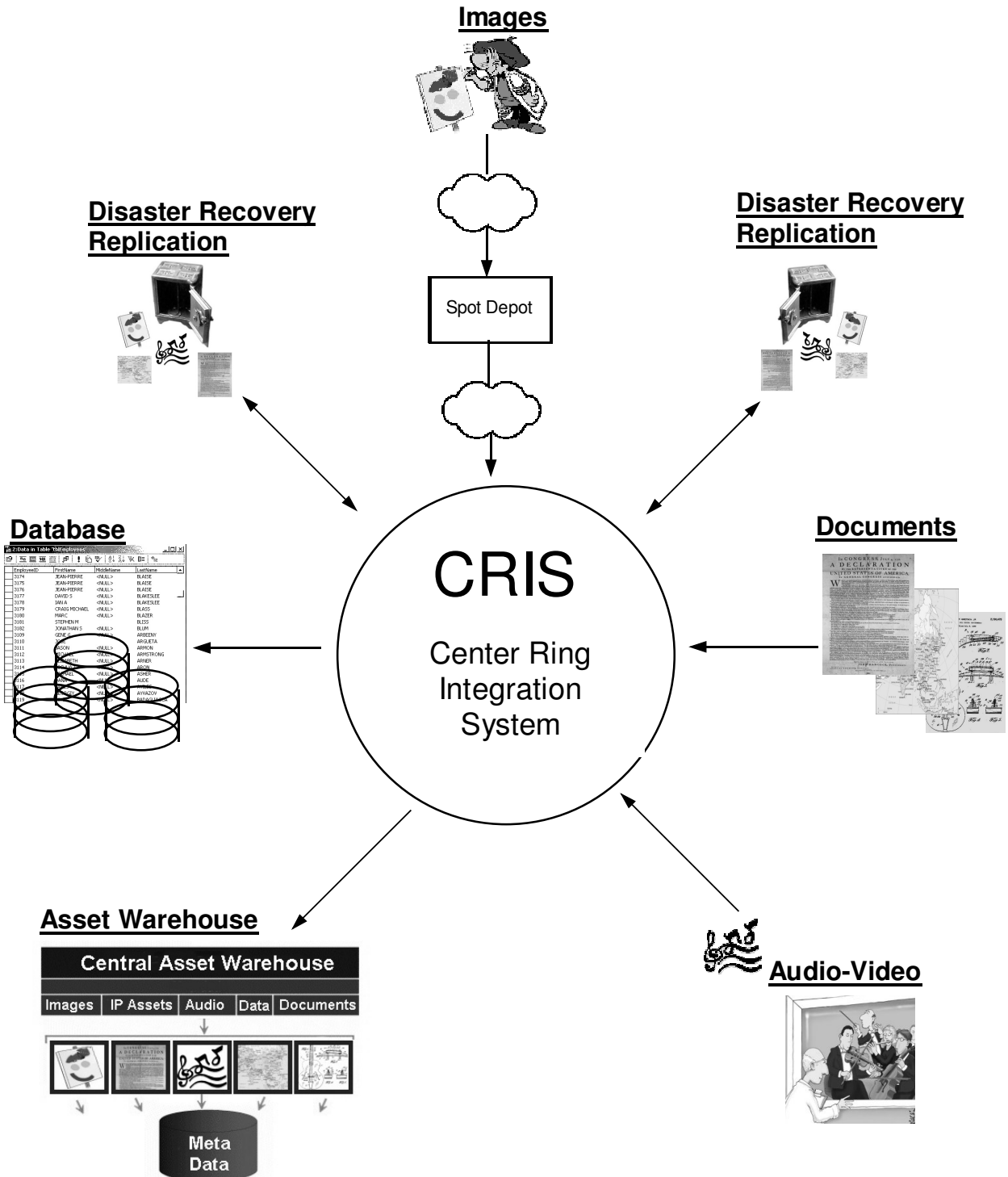


FIGURE 1