RestDDM

- ▸ Data Mining in Natural/ADABAS

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InfoTech-Cs

RestDDM

RestDDM data mining tool that provides a control of the Data usage in **Natural/Adabas Systems.**

RestDDm is source code parser that assists in IT Modernization and Change Management activities.

Few clicks on your browser and you will have the answers to questions
regarding location of:

      Adabas Access statements (Find, Store, Update etc.)
      Field Access statements
      Relation between DDM's (mapped in programs)
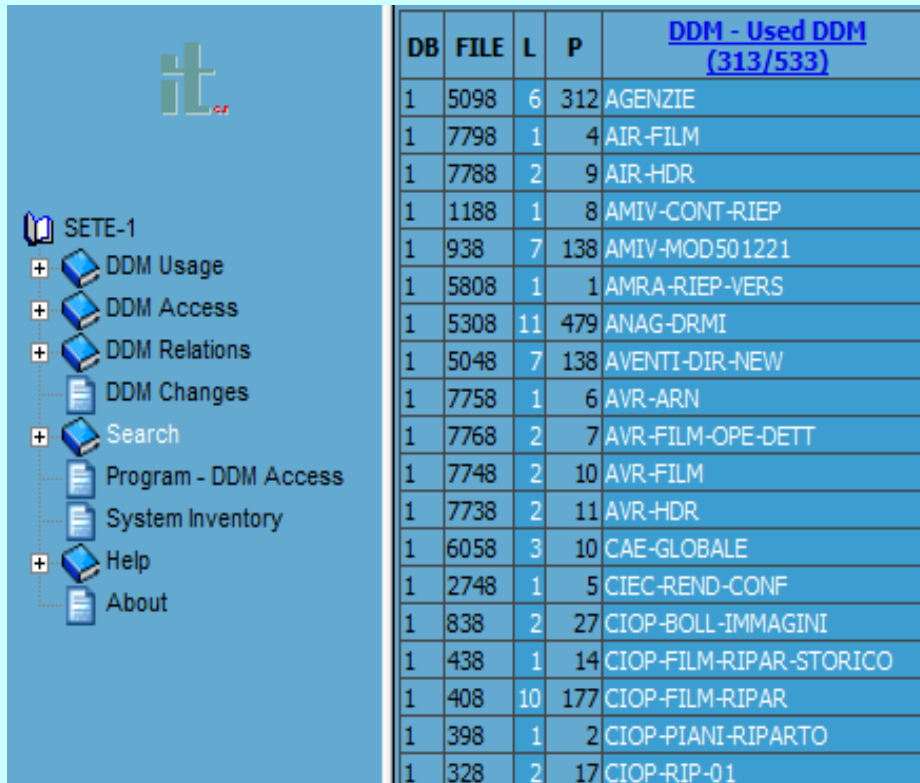   File (Field) Value changes (Update or Store) in System(Library, Application)
      ....

RestDDM is a flexible tool, you can analyze whole System (all Libraries), selected Libraries (steplibs) or part of the Library (Application – list of modules).

RestDDM outputs can be also used for building the Data Model (Entity Relation diagram).

RestDDM Results – Main Menu

DB	FILE	L	P	DDM - Used DDM (313/533)
1	5098	6	312	AGENZIE
1	7798	1	4	AIR-FILM
1	7788	2	9	AIR-HDR
1	1188	1	8	AMIV-CONT-RIEP
1	938	7	138	AMIV-MOD501221
1	5808	1	1	AMRA-RIEP-VERS
1	5308	11	479	ANAG-DRMI
1	5048	7	138	AVENTI-DIR-NEW
1	7758	1	6	AVR-ARN
1	7768	2	7	AVR-FILM-OPE-DETT
1	7748	2	10	AVR-FILM
1	7738	2	11	AVR-HDR
1	6058	3	10	CAE-GLOBALE
1	2748	1	5	CIEC-REND-CONF
1	838	2	27	CIOP-BOLL-IMMAGINI
1	438	1	14	CIOP-FILM-RIPAR-STORICO
1	408	10	177	CIOP-FILM-RIPAR
1	398	1	2	CIOP-PIANI-RIPARTO
1	328	2	17	CIOP-RIP-01

Tree menu (left panel):
- SETE-1
  - DDM Usage
  - DDM Access
  - DDM Relations
  - DDM Changes
  - Search
  - Program - DDM Access
  - System Inventory
  - Help
  - About

RestDDM is a web–browser (IE, Firefox) based application for retreiving the Adabas meta data from Natural (Cobol) programs.

The main features of RestDDM can be controlled via comprehensive control tree menu, which is positioned in the left part of the application window.

Right part shows the listing of DDMs (313) accessed in analyzed programs. Total number of analyzed DDMs is 533.

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DDM Usage – System – Used DDM

DB	FILE	L	P	DDM - Used DDM (313/533)
1	5098	6	312	AGENZIE
1	7798	1	4	AIR-FILM
1	7788	2	9	AIR-HDR
1	1188	1	8	AMIV-CONT-RIEP
1	938	7	138	AMIV-MOD501221
1	5808	1	1	AMRA-RIEP-VERS
1	5308	11	479	ANAG-DRMI
1	5048	7	138	AVENTI-DIR-NEW
1	7758		6	AVR-ARN
1				LM-OPE-DETT
1				LM
1				R
1	6058	3	10	CAE-GLOBALE
1	2748	1	5	CIEC-REND-CONF
1	838	2	27	CIOP-BOLL-IMMAGINI
1	438	1	14	CIOP-FILM-RIPAR-STORICO
1	408	10	177	CIOP-FILM-RIPAR
1	398	1	2	CIOP-PIANI-RIPARTO
1	328	2	17	CIOP-RIP-01
1	1438	2	38	CIOP-RIP-CLASSIFICHE
1	7778	4	6	CIOP-RIP-UTIL

Select (L)ibrary column

ANAG–DRMI(DDM) is accessed in 11 Libraries, 479 Modules.

List of Libraries (11) and modules (MUFOCT9) where ANAG–DRMI is accessed (2 FINDS).

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DDM Usage – System – Used DDM – Field Usage

Field PROD-COD (ANAG-DRMI) accessed in 9 Libraries and 356 Modules

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DDM Usage – System –Used DDM – Field Access–Read

Field PROD–COD is referenced in 13 Read statements.

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DDM Usage – Library – Used DDM

Used DDM

	Library
	CENS
	CIOPTP
	CNAG
	CNFTBT
	CNFTTP
	CONTRAT
	DEMINDIR
	DEMRIPT3
	DERIPTP
	DGCNIS
	DOR
	DOR-INT
	DOR-OLD
	DORBATCH
	DORMUSIC
	ELEZIONI
	IPITP

Select Library

DB	FILE	L	P	DOR - Used DDM (63/533)
1	5098	1	59	AGENZIE
1	5048	1	51	AVENTI-DIR-NEW
1	1618	1	16	CNAG-LGSP
1	568	1	140	CODCAE
1	5128	1	2	COMPAGNIE
1	6048	1	1	CONTAB-ESCLUSIONI
1	5118	1	53	DGCS-ANTICIPI-RTI
1	6918	1	3	DGCS-ANTICIPI
1	6888	1	1	DGCS-DATI-GEN
1	6878	1	4	DGCS-DATI-SEZ
1		1	3	DGCS-DETT-ANTIC
1		1	11	DGCS-MOVIMENTI
1	6898	1	1	DGCS-RIEP-ESCSOT
1	1938	1	1	DGCS-RIEP-MATU
1	6798	1	1	DOEM-DIFF-M4213
1	7178	1	167	DOOP-ANAG-ST
1	578	1	26	DOOP-FORMAT
1	7158	1	65	DOOP-NOTE-AADD
1	7128	1	393	DOOP-OPERE-ANAG
1	7138	1	307	DOOP-OPERE-TITL
1	7168	1	136	DOOP-RIPARTO-ST
1	7148	1	308	DOOP-RIPARTO
1	7188	1	66	DOOP-TITL-ST
1	7198	1	71	DOPE-COMPAGNIE
1	6818	1	78	DOPE-COND-PART

In library DOR selected DDM DGCS–RIEP–ESCSOT is accessed in program UPD–GEN on line 0020.

SETE-1
- DDM Usage
  - System
    - All DDM
    - Used DDM
    - Unused DDM
    - Unused Fields
    - Duplicated Fields
  - Library
    - Used DDM
- DDM Access
- DDM Relations
- DDM Changes
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  - Program - DDM Access
  - System Inventory
- Help
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DGCS-RIEP-ESCSOT (1 objects in 1 libs)
- DOR (1 OBJ)

SOURCE	LOC	SUD	F	G	R	H	S	U	D
UPD-GEN .NSP	2	0	0	0	2	0	0	0	0

PREVIOUS	NEXT	NO FILTER	UNLOAD	SAVE	LOAD to RestNat
Total: 1	0	upd-gen.nsp	2004-10-15 22:20:28	CATGEN	

```
0010FORMAT (2)  PS=64 LS=80
0020READ DGCS-RIEP-ESCSOT BY RIES-AADD-PRGR-SOTT-SEZN
0030  ACCEPT  RIES-SEZN-CODI = '3' AND RIES-ESCL-CODI GT ' '
```
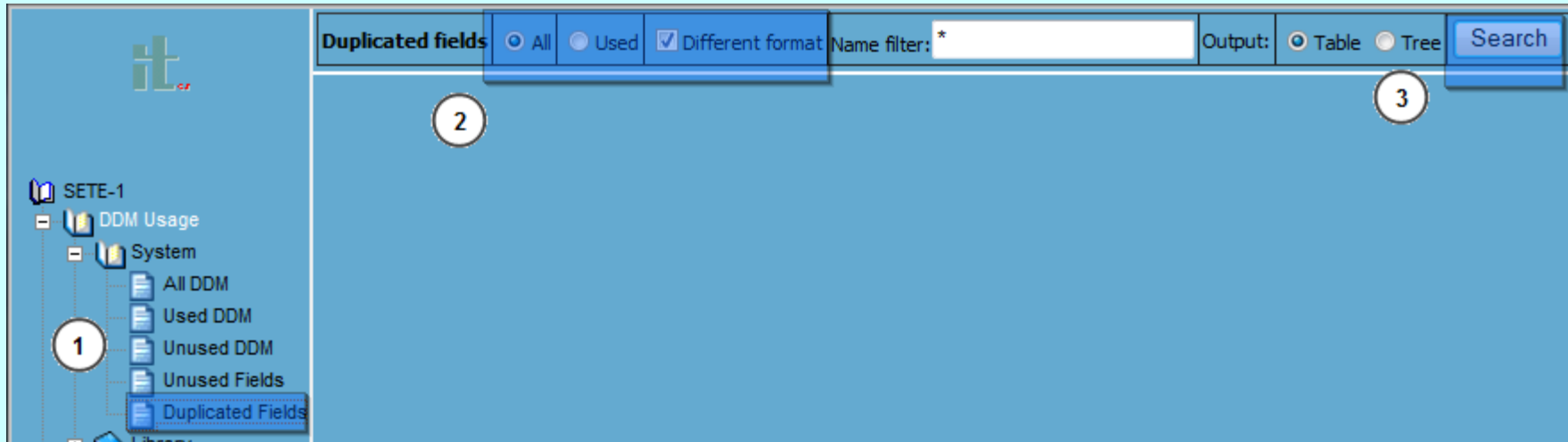
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DDM Usage – System – Unused Fields
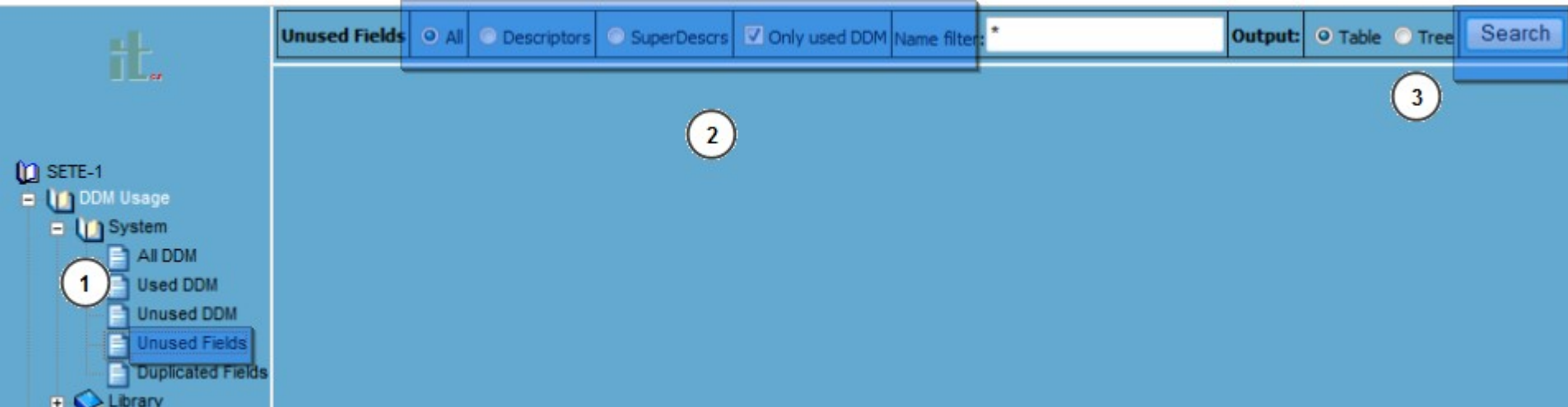
Unused Fields AMRA–C–ENTE–CONTR, AMRA–
C–TRIB–RA , ...
in DDM AMRA–RIEP–VERS

T	D	L	Name	F	Len	DB	Description
			DDM				DB/FILE
			AMRA-RIEP-VERS (5)				1 / 5808
	D	2	AMRA-C-ENTE-CONTR	N	3	AC	
	D	2	AMRA-C-TRIB-RA	N	4	AP	
	D	2	AMRA-N-QUIET-RA	A	15	AT	
	D	1	AMRA-N-NUM-CAB-RA	A	16	BB	
	D	1	AMRA-D-CONT-770	N	4	BE	
			ANAG-DRMI (1)				1 / 5308
	D	2	PROD-ANAG-ID	N	10	IA	

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DDM Usage – System – Duplicated Fields

TIPO (in 2 DDMs)				
AGENZIE-E	1	5248	A	1
ENC-PREMI	1	5428	A	4
TELEFONO (in 4 DDMs)				
AGENZIE-E	1	5248	N	8
CESS-CLIENTI	1	5618	N	9
CLIENTI	1	5238	N	9
SEGR-COM	1	6198	N	3

Fields having the same field Name and with different format. Field TELEFONO in DDM's:

    Agenzie-E   (TELEFONO – N8)

    Cess-Client (TELEFONO – N9)

    ....

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DDM Access – System – Access type (ALL)

DDM AVENTI-DIR-NEW is accessed 114 times (Find, Get, Read ..)

DDM Access										
DDM	F	G	R	S	D	U	H	SUD	Count	Reduce
AGENZIE	214	17	44	18	3	8	1	29	305	13
AIR-FILM	0	0	2	1	0	0	0	1	3	1
AIR-HDR	3	0	3	1	0	3	1	4	11	4
AMIV-CONT-RIEP	1	0	0	0	0	0	1	0	2	2
AMIV-MOD501221	76	4	39	0	0	5	13	5	137	17
AMRA-RIEP-VERS	0	0	1	0	0	0	0	1	1	1
ANAG-DRMI	736	67	168	15	12	54	36	81	1088	28
AVENTI-DIR-NEW	97	0	2	8	3	4	0	15	114	5
AVR-ARN	4	0	0	1	0	1	0	2	6	3
AVR-FILM-OPE-DETT	0	1	4	1	0	1	0	2	7	1
AVR-FILM	3	0	5	1	0	2	0	3	11	5
AVR-HDR	5	0	2	1	0	1	1	2	10	3
CAE-GLOBALE	3	0	6	1	0	0	0	1	10	2
CIEC-REND-CONF	2	3	2	1	1	5	0	7	14	2

DDM: AVENTI-DIR

Access	Descriptor	Library	Object	Statement
DELETE		DOR	DOOPATC1.NSP	DELETE(0890)
DELETE		DOR	DOOPATC4.NSP	DELETE(1530)
DELETE		DOR	DOOPATC5.NSP	DELETE(0640)
FIND	AG-NRCAE-04	DOR-INT	DORMP120.NSP	FIND AVENTI-DIR-NEW WITH AG-NRCAE-04 =
FIND	AG-NRCAE-04	DOR-OLI	DV228.NSP	FIND AVENTI-DIR-NEW WITH AG-NRCAE-04 =
FIND	CODIOPE	DGCNIS	DGCNITEF.NSP	FIND AVENTI-DIR-NEW-VIEW WITH CODIOPE
FIND	CODIOPE	DGCNIS	DGCNRB3X.NSP	FIND AVENTI-DIR-NEW-VIEW CODIOPE = L-P
				FIND AVENTI-DIR-NEW-VIEW CODIOPE EQ L-
FIND	CODIOPE	DGCNIS	DGCNRB3Y.NSP	FIND AVENTI-DIR-NEW-VIEW CODIOPE = L-P
				FIND AVENTI-DIR-NEW-VIEW CODIOPE EQ L-
FIND	CODIOPE	DGCNIS	DOCNATE8.NSP	FIND AVENTI-DIR-NEW-VIEW WITH CODIOPE
FIND	CODIOPE	DGCNIS	DOCNATI2.NSP	FIND AVENTI-DIR-NEW-VIEW WITH CODIOPE
FIND	CODIOPE	DGCNIS	DOCNRB6K.NSP	FIND AVENTI-DIR-NEW-VIEW WITH CODIOPE = L-C
FIND	CODIOPE	DGCNIS	DOCNRBGG.NSP	FIND AVENTI-DIR-NEW WITH CODIOPE = AD
				FIND AVENTI-DIR-NEW WITH CODIOPE = AD

SETE
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Module DGCNRB3Y.NSP on line 4110 is using descriptor CODIOPE to access selected DDM.

PREVIOUS	NEXT	FILTER	UNLOAD	SAVE	LOAD to RestNat

Total: 0   0   dgcnrb3y.nsp

```
4080FIND FIRST OPERE-NEW-VIEW CODICE EQ L-PREC-COD-OPE
4090MOVE TITOLO TO L-TITOLO
4100RESET L-PERC
4110FIND AVENTI-DIR-NEW-VIEW CODIOPE EQ L-PREC-COD-OPE
4120    WHERE N-POS EQ L-PREC-COD-AVD
4130  IF NO RECORD FOUND DO
4140    MOVE '**** NOME ERRATO ***' TO L-NOME-4
4150    ESCAPE
4160  DOEND
4170  MOVE NOME(4110) TO L-NOME-4
4180  ADD PERCEN(1)  TO L-PERC
```

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DDM Access – System – Access type (ALL)

Selected DDM AVENTI–DIR–NE is accessed in 5 different modes (listed in the middle):Find AG–NR–CAE–04,

Find CODIOPE, Find N–POS, Read CODIOPE, Read NOME.

74 modules contain statement Find AVENTI–DIR–NEW with CODIOPE

DDM Access - Library – Access type (Find, Get, Read,..)

DDM AVENTI–DIR–NEW is accessed by 21 Find statements
in selected library DGCNIS

DDM Access – System – Access type (Find, Get,Read,..)

Selected DDM ANAG–DRMI is Updated in 54 modules (listed bellow)

DDM Access										
DDM	**F**	**G**	**R**	**S**	**D**	**U**	**H**	**SUD**	**Count**	**Reduce**
AGENZIE	214	17	44	18	3	8	1	29	305	13
AIR-FILM	0	0							3	1
AIR-HDR	3	0						11		4
AMIV-CONT-RIEP	1	0	0		0	0	1		2	2
AMIV-MOD501221	76	4	39	0		5	13	5	137	17
AMRA-RIEP-VERS	0	0	1	0	0	0	0	0	1	1
ANAG-DRMI	736	67	168	15	12	54	36	81	1088	28
AVENTI-DIR-NEW	97	0	2	8	3	4	0	15	114	5
AVR-ARN	4	0	0	1	0	1	0	2	6	3
AVR-FILM-OPE-DETT	0	1	4	1	0	1	0	2	7	1

Select
(U)pdate column

1
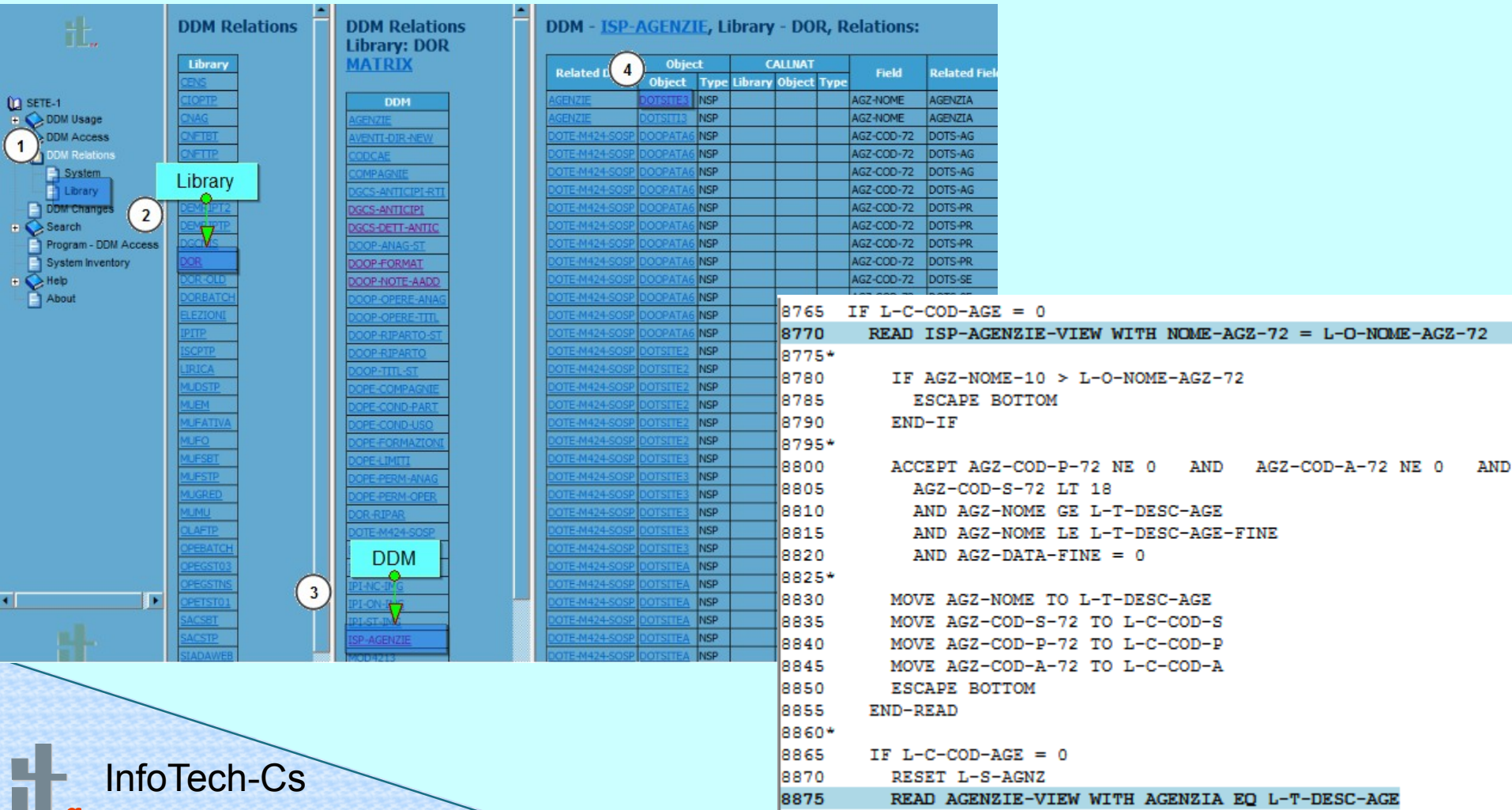
Descriptor	Library	Object	Statement
	MUFO	MUFOFNI2.NSN	UPDATE
	MUFO	MUFOFNV2.NSN	UPDATE
	MUFO	MUFOSNE3.NSN	UPDATE(0640)
			UPDATE(1130)
	MUFO	MUFOSNE8.NSN	UPDATE(0660)
			UPDATE(1210)
	MUFO	AGGPROD.NSP	UPDATE SAME
	MUFO	MARCHIO.NSP	UPDATE (2150) MARC-PROD-STOR
	MUFO	MARCHIO5.NSP	UPDATE (1420) MARC-ASSC(INDIC
			UPDATE (1550) MARC-ASSC(INDIC
			UPDATE (1790) MARC-ASSC(INDIC

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DDM Relations – Library

In selected Library (DOR) there are relations between ISP-AGENZIE and AGENZIE as deteminated by code analyzer in source code DOTSITE3 on lines 8830, 8875.

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DDM Changes

In the period 18.2 – 25.2.

3 DDMs (AVR–ARN, ..) were changed

Search – Field (All types,Group,Periodic,Multiple)

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Search – DDM

Program – DDM Access

Measuring Volume:

Library	NSP	NSN	NSS	NSM	NSC	NSL	NSG	NSA	Other	Total
CENS	144	19	0	2	0	30	13	15	0	223
CIOPTP	599	49	32	238	3	63	6	6	1	997
CNAG	1189	11	7	484	0	33	5	1	0	1730
CNFTBT	40	0	0	0	0	0	0	0	0	40
CNFTTP	130	1	0	59	0	4	0	2	0	196
CONTRAT	65	0	0	3	0	0	0	0	0	68
DDM	0	0	0	0	0	0	0	0	533	533
DEMINDIR	25	1	0	0	0	6	1	1	2	36
DEMRIPBT	1586	13	170	220	17	255	5	2	0	2268
DEMRIPT2	138	2	1	90	0	55	4	3	14	307
					0	1	0	0	0	55
					3	143	9	19	1	1348
					7	579	6	14	3	2786

SETE-1
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Volume CIOPTP:

Type	Objects
Programs	599
Subprograms	49
Subroutines	32
Maps	
Copycodes	
Local data	63
Global data	6
Parameter data	6
DDM	0
Others	1
Total	997

Seect

Library CIOPTP, Programs

Programs	User	Date	Usage
APE-NS00.NSP	CATGEN	15.10.2004	
APE-NS10.NSP	CATGEN	15.10.2004	DDM
APE-NS20.NSP	CATGEN	15.10.2004	DDM
APE-NS30.NSP	CATGEN	15.10.2004	DDM
APE-NS40.NSP	CATGEN	15.10.2004	DDM
APE-NS50.NSP	CATGEN	15.10.2004	DDM
APE-NS60.NSP	CATGEN	15.10.2004	DDM
APE-NS70.NSP	CATGEN		
APE-NS80.NSP	CATGEN		
APE-NS90.NSP	CATGEN	15.10.2004	DDM
BIOPATEG.NSP	CATGEN	15.10.2004	DDM
BIOPBT27.NSP	CATGEN	15.10.2004	DDM
BRSEZION.NSP	RUSSO	24.8.1999	DDM

Select

APE-NS50 (2 DDM
- SIS-ANAGRAF (17 FIELDs)
- TABELLE (5 FIELDs)
  - SD-AA-AB
  - AB-VALEL
  - AC-DECO1-20
  - AE-INVAL-20
  - AA-NRTAB-20

Select

Select

PREVIOUS	NEXT	NO FILTER	UNLOAD

Total: 1   0

```
1320    MOVE BN-PERCI-N TO PERCI-8(N08
1330    FIND TABELLE WITH AE-INVAL-20
1340       WHERE AA-NRTAB-20 EQ  7
1350    IF NO DO
```
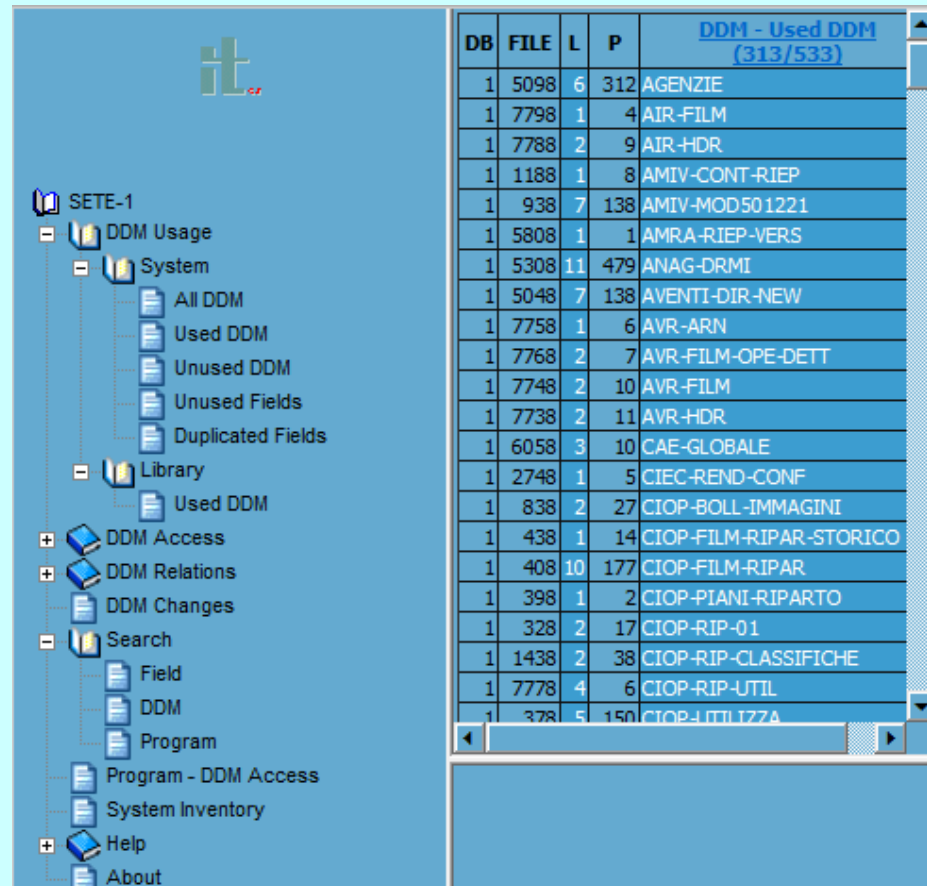
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System Inventory

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RestDDM Results – Updates

To update periodically RestDDM results just rerun RestDDM,
for more info RestDDM settings Click here.

 RestDDM runs can be scheduled (daily, weekly etc) and
synchronize with NCD files downloads (mainframe).

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RestDDM Messages

Messages file are located in Xml folder in Output Directory.

RestDDM results are sensitive on correct System and Steplib settings.

Message Error file:

```
<?xml version="1.0" encoding="UTF-8" ?>
- <ERROR>
  - <MSG STAMP="20120309095353">
    <![CDATA[ 0013 [CIOPTP\GS-QB16 .NSP:00081,0250]   incorrect structure before / in END_FIND          >>#0250
    ]]>
    </MSG>
  <MSG STAMP="20120309095353">
    <![CDATA[ 0013 [CIOPTP\GS-QB16 .NSP:00083,0260]   incorrect structure before / in END_SUBROUTINE     >>#0260
    ]]>
    </MSG>
  - <MSG STAMP="20120309095817">
    <![CDATA[ 0013 [CNAG\FLA      .NSP:00073,0160]   unaccessible statement No.:0010 in LOOP           >>#0160
    ]]>
    </MSG>
  - <MSG STAMP="20120309100224">
    <![CDATA[ 0013 [CNFTBT\GS-1    .NSP:00035,0050]   incorrect structure before / in DOEND             >>#0050
```

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Thank you for your attention

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