



IBM Software Group | IMS


I am IMS



IMS Enterprise Suite Explorer for Development

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IMS Application Development (AD) Challenges



Shrinking knowledge base around IMS & hierarchical data base model



Difficult to find DLI programmers



Fewer experienced COBOL and PL/I programmers



Lack of integrated development solutions and tools



Difficult to test and deploy applications

IMS Simplification Strategy

NEW IMS interfaces

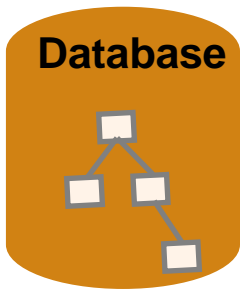
IMS interfaces

IMS



- DDL
- Restful
- Schemas
- Dynamic
- Point and Click
- Drag and Drop

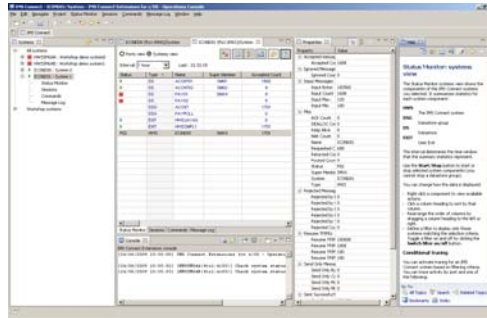
- JCL
- ISPF
- SDSF
- JES
- User Mods
- User Exits
- DBDGEN
- PSBGEN
- ACBGEN
- OLC
- DRD
- DLI



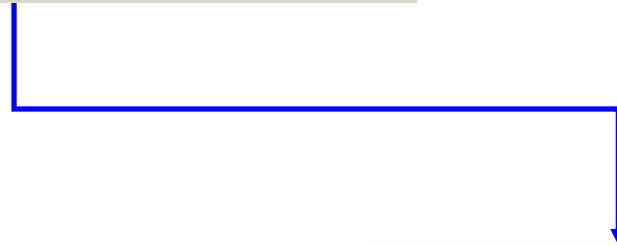
Reduce the need for special, in-depth IMS skills

IMS Simplification Strategy

IMS Explorer for Development



Developer

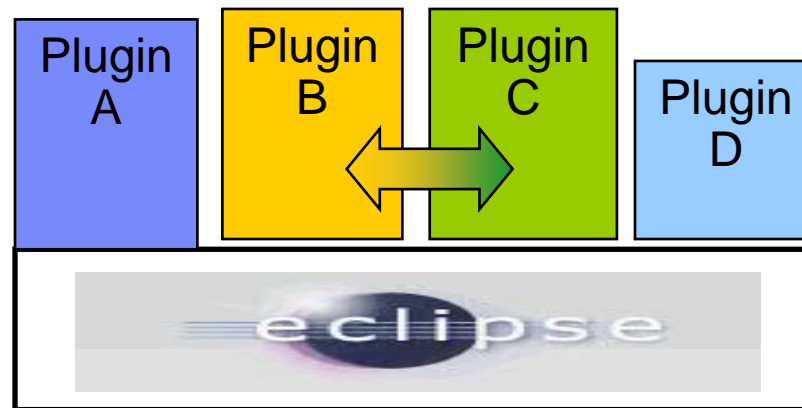


■ ISPF



Eclipse Integrated Development Environment

- Is a fully Integrated Development Environment supporting
 - Java, C/C++/C#, PERL, PHP, HTML, JSP™, EJB™ ...
- Integration platform for tools and open platform for application development tools
- Easily add new tools to existing installed products
 - common shell sharing
- All IBM Rational® products are Eclipse based



Introducing the IMS Explorer for Development

- Easier visualization and editing of IMS Database and Program Definitions
 - Provide graphical editors to:
 - Display IMS database hierarchical structures
 - Display/create/edit PSBs
 - Change/add fields on a DBDs
 - Import Cobol CopyBooks and PL/I Structures to a database segment*
 - Generate of DBD and PSB source
- Ability to easily access IMS data using SQL statements
 - Leveraging IMS v11 Universal JDBC driver
- Connectivity to the z/OS system
 - Browse a Data Set and submit JCLs
 - Import and export DBD and PSB source files from a Data Set to the IMS Explorer, and vice-versa

*Requires RDz 8

Displaying an IMS Database Structure via Green Screen

```

DBD      NAME=APSV01AD,ACCESS=(HISAM,VSAM),PASSWD=NO
*****
*          DATASET GROUP NUMBER 1                      *
*****
DSG001 DATASET DD1=HISKSDSA,OVFLW=HISESDSA,DEVICE=3330,SIZE=(512,512),C
        RECORD=(22,22)
*****
*          SEGMENT NUMBER 1                            *
*****
        SEGM   NAME=A,PARENT=0,BYTES=11,RULES=(LLL, LAST),          C
                PTR=(NOTWIN,, ,CTR, )
        FIELD   NAME=(A,SEQ,U),START=1,BYTES=3,TYPE=C
        LCHILD  NAME=(AB),PTR=NONE,RULES=LAST
*****
*          SEGMENT NUMBER 2                            *
*****
        SEGM   NAME=AA,PARENT=( (A, ) ),BYTES=12,RULES=(LLL, LAST),  C
                PTR=(NOTWIN,, , , )
        FIELD   NAME=(AA,SEQ,U),START=1,BYTES=4,TYPE=C

```


Displaying a physical IMS Database Structure with IMS Explorer

The screenshot shows the IMS Explorer interface with a project named DEMOIOD and database name AUTODB. The main area displays a hierarchical diagram of database segments. A yellow callout box points to a dashed red line connecting the SALES segment in the AUTODB database to the EMPNO field in the EMP segment in the EMPDB2 database, with the text "Logical relationships between databases".

Below the diagram, the Properties window is open for the DEALER segment, showing the following details:

Property	Value
.Segment statement	
Length (BYTES):	61
Parent segment (PARENT):	0
Segment name (NAME):	DEALER
Source segment (SOURCE):	
List of fields	

A second yellow callout box points to this Properties window with the text "Additional properties of a Segment or Field".

Displaying a logical IMS Database Structure with IMS Explorer

The screenshot shows the IMS Explorer interface for the AUTOLDB database. The main window displays a hierarchical tree of segments:

- ORDER** (Length: 74 bytes)
 - AUTOQB.ORDER
 - ORDNBR
 - LASTNME
 - FIRSTNME
 - DATE
 - TIME
- SALES** (Length: 131 bytes)
 - AUTOQB.SALES
 - SALENUM
 - SALDATE
 - LASTNME
 - STKVIN
 - COLOR
 - PRICE
 - WRNTY
- STOCK** (Length: 46 bytes)
 - AUTOQB.STOCK
 - STKVIN
 - COLOR
 - PRICE
 - LOT
 - WRNTY
- MODEL** (Length: 37 bytes)
 - AUTOQB.MODEL
 - /SX1
 - MODTYPE
 - MODKEY
 - MAKE
 - MODEL
 - YEAR
 - MSRP
 - COUNT
- SALESINIF** (Length: 15 bytes)
 - AUTOQB.SALESINIF
 - QUOTA
 - SALESYTD
 - COMSSION
- EMPLINFO** (Length: 61 bytes)
 - EMPD2.EMPLINFO
 - ADDRESS
 - STREET
 - CITY
 - STATE
 - ZIP
- SALES** (Length: 62 bytes)
 - AUTOQB.SALES
 - EMPD2.EMPL
 - EMPNO
 - LASTNME
 - FIRSTNME
- DEALER** (Length: 61 bytes)
 - AUTOQB.DEALER
 - DLRNO
 - DLRNAME
 - CITY
 - ZIP
 - PHONE

The **SALES** segment is highlighted as a concatenated segment. A callout box points to it with the text: "A concatenated segment and its underlying source segments".

The Properties window at the bottom shows the following details for the selected segment:

Property	Value
1 - Segment (SEGM)	
Alias	
Parent segment (PARENT)	DEALER
Segment name (NAME)	SALES
Source segment (SOURCE)	((SALES,DATA,AUTOQB),(EMPL,DATA,EMPD2))

PSB and PCB Definitions via Green Screen

```

HOSPITAL PSBGEN1 F1 V 80 Trunc=80 Size=175 Line=78 Col=1 Alt=0
====>
00075 *****
00076 *          PCB NUMBER 6          DB      DEDBJN21
00077 *****
00078 -  PCB          TYPE=DB,DBDNAME=DEDBJN21,POS=M,PROCOPT=A,KEYLEN=26,          C
00079          PCBNAME=PCB01
00080          SENSEG  NAME=HOSPITAL,PARENT=0
00081          SENSEG  NAME=PAYMENTS,PARENT=HOSPITAL,PROCOPT=GI
00082          SENSEG  NAME=WARD,PARENT=HOSPITAL
00083          SENSEG  NAME=PATIENT,PARENT=WARD
00084          SENSEG  NAME=ILLNESS,PARENT=PATIENT
00085          SENSEG  NAME=TREATMNT,PARENT=ILLNESS
00086          SENSEG  NAME=DOCTOR,PARENT=TREATMNT
00087          SENSEG  NAME=BILLING,PARENT=PATIENT
00088 *****
00089 *          PCB NUMBER 6          DB      DEDBJN21
00090 *****
00091  PCB          TYPE=DB,DBDNAME=DEDBJN21,POS=M,PROCOPT=G0,KEYLEN=26,          C
00092          PCBNAME=PCB10
00093          SENSEG  NAME=HOSPITAL,PARENT=0
00094          SENSEG  NAME=PAYMENTS,PARENT=HOSPITAL
PF 1 FIG          2 SCREEN 2          3 QUIT          4 FILE          5 REPEAT          6 ADD
PF 7 BACKWARD    8 FORWARD          9 XFILE         10 LEFT          11 RIGHT          12 JOIN

```

Building a PCB definition with IMS Explorer

PCB name: PCB01 | All Segments (Edit Sensitivity) |

HOSPITAL
Total length: 900

- HOSPLL
- HOSPCODE
- HOSPNAME

PAYMENTS
Total length: 900

- PATMLL
- PATNUM
- AMOUNT

WARD
Total length: 900

- WARDLL
- WARDNO
- WARDNAME
- PATCOUNT
- NURCOUNT
- DOCCOUNT

PATIENT
Total length: 900

- PATLL
- PATNUM
- PATNAME

Automatic Generation →

```

*****
*          PCB NUMBER 5          DB    DEDBJN21
*****
PCB          TYPE=DB, DBDNAME=DEDBJN21, POS=M, PROCOPT=A, KEYLE
          PCBNAME=PCB01
SENSEGE     NAME=HOSPITAL, PARENT=0
SENSEGE     NAME=PAYMENTS, PARENT=HOSPITAL, I
SENSEGE     NAME=WARD, PARENT=HOSPITAL
SENSEGE     NAME=PATIENT, PARENT=WARD
SENSEGE     NAME=ILLNESS, PARENT=PATIENT
SENSEGE     NAME=TREATMNT, PARENT=ILLNESS
SENSEGE     NAME=DOCTOR, PARENT=TREATMNT
SENSEGE     NAME=BILLING, PARENT=PATIENT
*****
*          PCB NUMBER 6          DB    IVPDB1
*****
                
```

Generated PSB source

Point and click to select Sensegs

Querying an IMS Database with DFSDDLT0

```

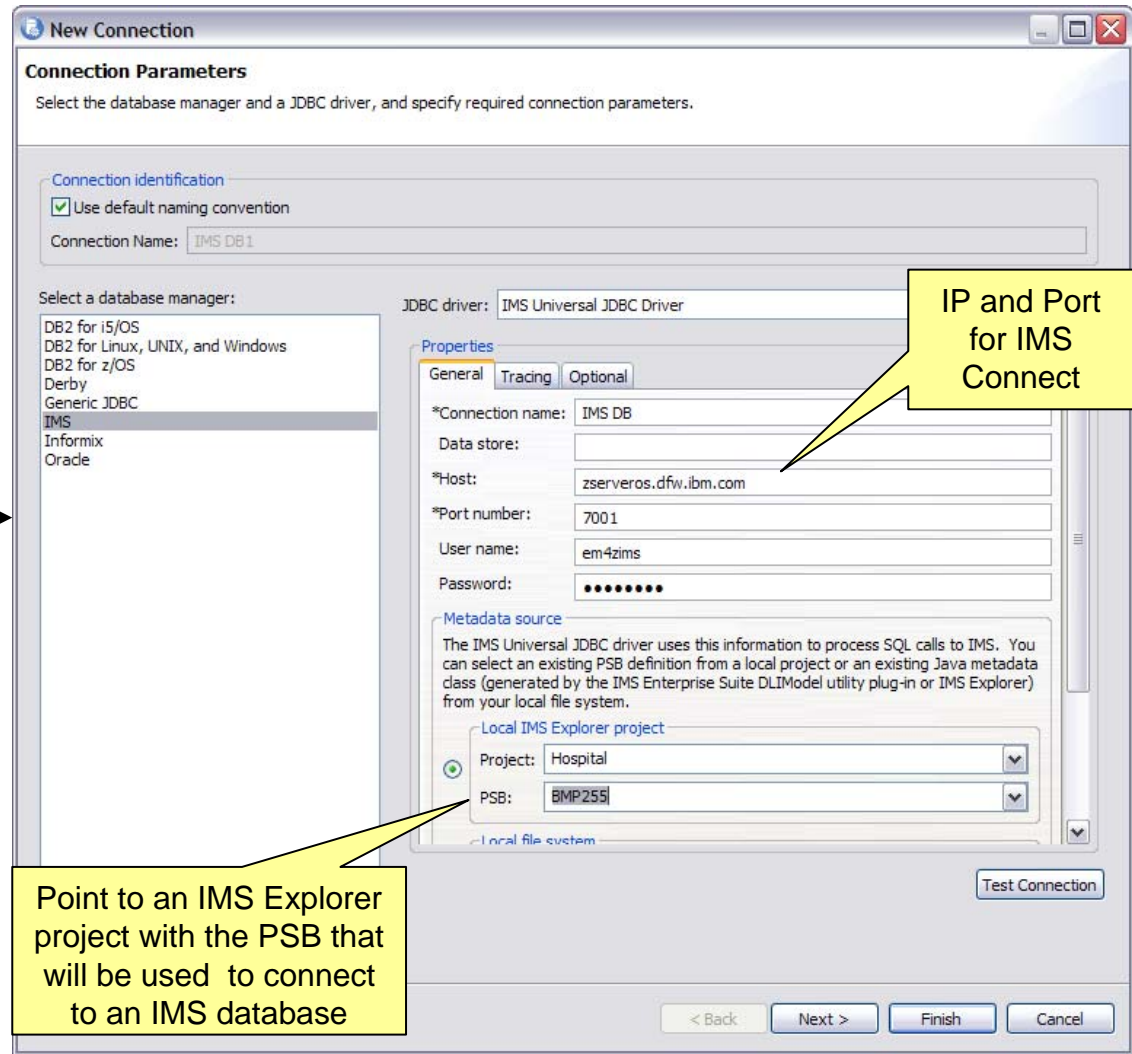
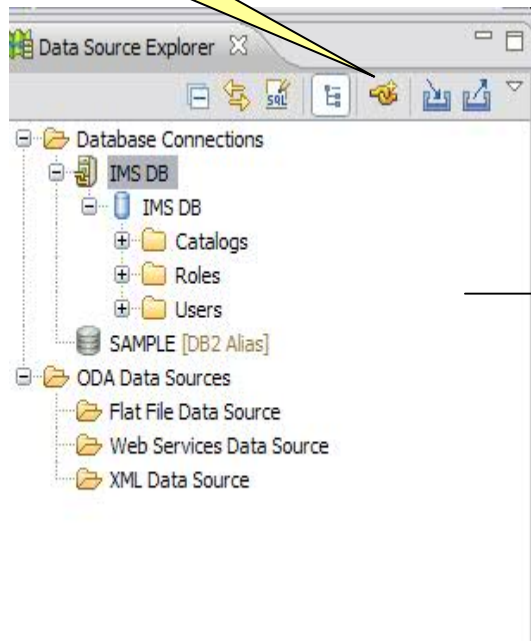
$DDLTO    NEWJCL    F1    V 80    Trunc=80    Size=96    Line=25    Col=1    Alt=0
====>
00022 U *****
00023 WTO Start of the DDLTO stream
00024 U status card has all 1's so all tracing is ON.
00025 U status card has 00002 so we use the second PCB in the PSB
00026 S 1 1 1 1 1      00002
00027 WTO Now doing GN through the database
00028 L      GN
00029 E      DATA    KAA11**K1*
00030 E    01      K1      0005KAA11
00031 L      GN
00032 E      DATA    KBBB11**K2
00033 E    02      K2      0011KAA11KBBB11
00034 L      GN
00035 E      DATA    KAA31KEE31K31311131213131314131513KEE31K5R31
00036 E    03      K3K5      0021KAA11KBBB11KAA31KEE31
00037 L      GN
00038 E      DATA    KAA31**K1*
00039 E    04      K1X      0026KAA11KBBB11KAA31KEE31KAA31
00040 L      GN
00041 E      DATA    KAA31KEE32K31321132213231324132513KEE32K5R32
PF 1 FIG      2 SCREEN 2      3 QUIT      4 FILE      5 REPEAT      6 ADD
PF 7 BACKWARD 8 FORWARD 9 XFILE    10 LEFT     11 RIGHT     12 JOIN

```

Querying an IMS Database with IMS Explorer with Universal JDBC driver

1 – Start by establishing a connection to an IMS system

Create a new connection



Querying an IMS Database with IMS Explorer with Universal JDBC driver

2 – Connect ... and start querying, updating, deleting IMS data

The screenshot shows the Eclipse IDE interface with the following components:

- Data Project Explorer:** Shows a project named 'Demo (IMS Hospital)' containing SQL scripts (Script1.sdl, Script2.sdl, Script3.sdl) and an XML file.
- Data Source Explorer:** Shows the connection to 'IMS Hospital' with schemas 'BMP255' and 'PCB01'. Under 'PCB01', various database segments like BILLING, DOCTOR, HOSPITAL, PATIENT, etc., are listed.
- SQL Builder:** A window for constructing SQL queries. It shows two tables: 'HOSPITAL' and 'PATIENT'. The 'HOSPITAL' table has columns HOSPCODE, HOSPLL, and HOSPLNAME. The 'PATIENT' table has columns HOSPITAL_HOSPC, WARD_WARDNO, PATNUM, PATLL, and PATNAME. A query is being built: `SELECT PCB01.HOSPITAL.HOSPLNAME, PCB01.PATIENT.PATNAME, PCB01.HOSPITAL.HOSPCODE FROM PCB01.HOSPITAL, PCB01.PATIENT`.
- SQL Results:** A table showing the results of the query. The columns are HOSPLL, HOSPCODE, HOSPLNAME, HOSPITAL_HOSPCODE, and WARD_WARDNO. The results show 10 rows of data.

Here you can create SQL scripts with Select, Update, Delete, Insert statements

SQL Builder with content assistance to build a SQL statement

Connection →
PSB = Schema →
DB PCB = Database →

View w/ the SQL results

Database Segments

Browsing Data Sets and Submitting JCL's

```

Session A - [32 x 80]
File Edit View Communication Actions Window Help
Menu Options View Utilities Compilers Help

DSLIST - Data Sets Matching MRODER                               Row 1 of 11
Command - Enter "/" to select action                           Message                               Volume
-----
MRODER                                                         *ALIAS
MRODER.ALAN.STUFF                                             SYS195
MRODER.BROADCAST.LIST                                         SYS147
MRODER.DECODE.IMSTESTG.IMS10A.SYSPUNCH                       SYS247
MRODER.DECODE.IMSTESTG.IMS10A.SYSPUNCH.SMALL                SYS126
MRODER.DFSRLECO.SBS.DBD.DBPDPS                               SYS184
MRODER.DFSRLECO.SBS.DBD.DBPDPS.PDSE                         SYS184
MRODER.IMSFPX.IMS10A.DBDSRC                                  IMSFPX
MRODER.IMSFPX.IMS10A.PSBSRC                                  IMSFPX
MRODER.ISPF.PROFILE                                          SYS150
MRODER.JCL.CNTL                                              SYS151
***** End of Data Set list *****

Command ==>
F1=Help   F2=Split   F3=Exit   F5=Rfind   F7=Up     F8=Down   F9=Swap
F10=Left  F11=Right  F12=Cancel

MA a
30/015
Connected to remote server/host stlmvs1.svl.ibm.com using lu/pool ST11TM45 and port 23
    
```

Browsing Data Sets and Submitting JCL's with the IMS Explorer

The screenshot displays the IMS Enterprise Suite Explorer interface. The top-left pane shows a tree view of data sets under the qualifier 'MRODER'. A context menu is open over the 'IEBCOPY' data set member, with options: 'New Data Set Member...', 'Open', 'Submit Job', and 'Delete'. A yellow callout points to this menu with the text 'Browse data sets'.

The top-right pane shows the JCL code for the 'IEBCOPY' job. A yellow callout points to the 'COPY INDD= ((INPUT1, R) , OUTDD=OUTPUT1' line with the text 'Edit a data a set member'.

The bottom-left pane shows the 'Jobs' section with a job name 'MRODER*' and a warning icon. A yellow callout points to this area with the text 'JES output is displayed here'.

The bottom-right pane shows the 'Console' output, displaying the command: 'z/OS DSN=MRODER.JCL.CNTL(IEBCOPY) - saved'.

IMS Explorer Integration Strategy

Out of the box shell-sharing
with:

- IMS Tools
- Rational Development for Systems z
 - Including RDz UT
- Problem Determination Tools
- Optim Data Studio



Want to Learn More About IMS Explorer?

Go to:

www.ibm.com/ims

→ Click on IMS Enterprise Suite

IMS Enterprise Suite Components

IMS Enterprise Suite SOAP Gateway allows you to get more value from your trusted IMS application assets in an SOA environment, without requiring any changes to your business logic. With SOAP Gateway, your IMS applications can call out to web services, or be called from web services, independent of platform, environment, programming language, or programming model. Your IMS applications can also send business event data to business event processing and monitoring engines such as [IBM WebSphere® Business Events](#) and [IBM Business Monitor](#).


IMS Enterprise Suite Connect APIs for Java and C extend connectivity of distributed platforms to IMS and simplify application development for stand-alone, user-written IMS Connect clients.

IMS Enterprise Suite DLIModel utility plug-in translates IMS source files into reliable metadata that can be used for IMS XML or Java application development in an Eclipse-based environment, eliminating the need for hand-coding.

IMS Enterprise Suite Explorer for Development (IMS Explorer for Development) is the new face of IMS: an Eclipse-based graphical tool that simplifies IMS application development tasks. Display and edit IMS databases, segments, fields and more, from an industry-standard IDE.



IMS Enterprise Suite Java Message Service (JMS) API expands Java application development in Java dependent regions to offer synchronous callout support via the ICAL DL/I call.

Demo




IMS Enterprise Suite Explorer for Development 2.1

Integrated IBM Products

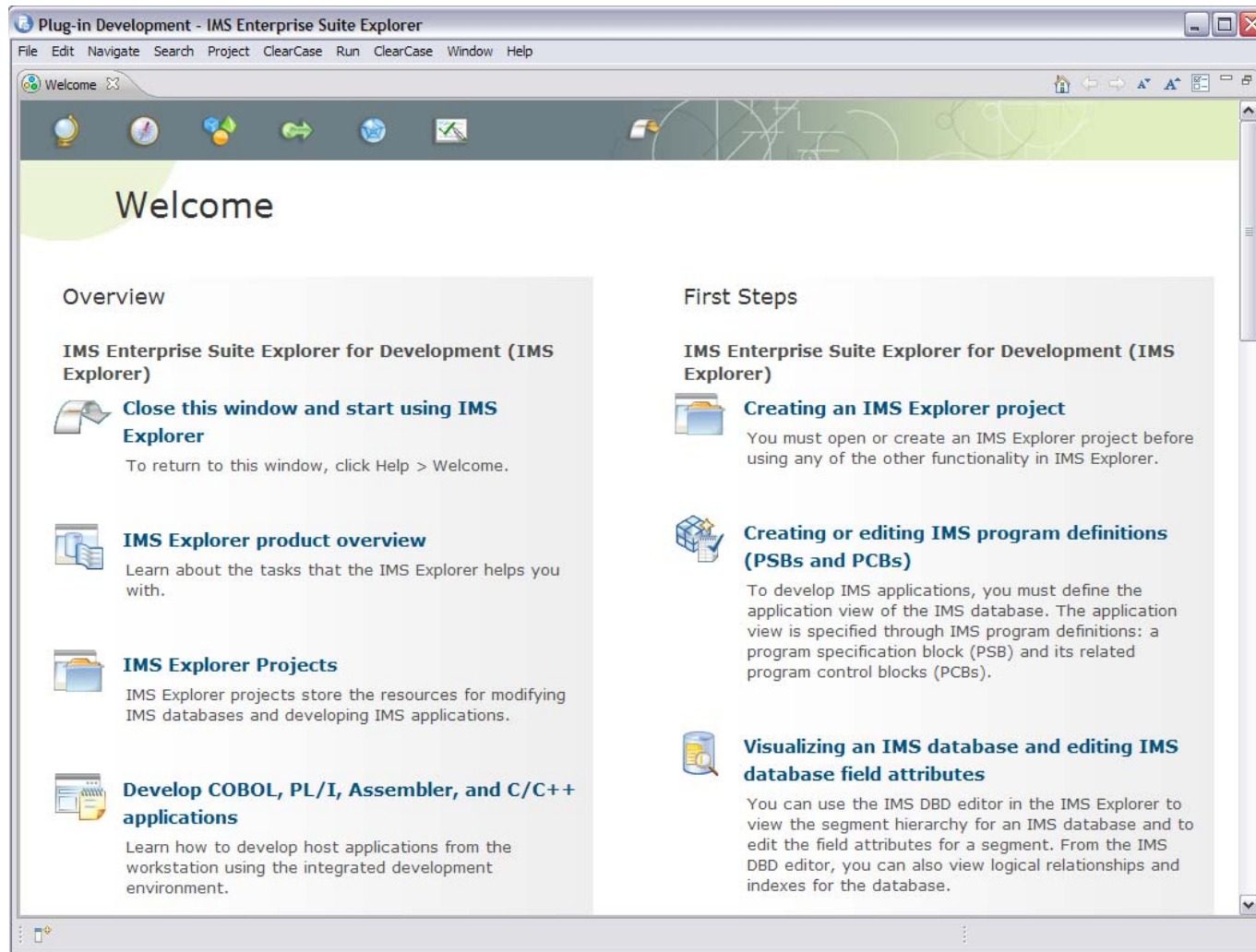
-  IBM Rational Developer for System z with Java
-  IMS Enterprise Suite Explorer for Development 2.1

[Loading Workbench](#)

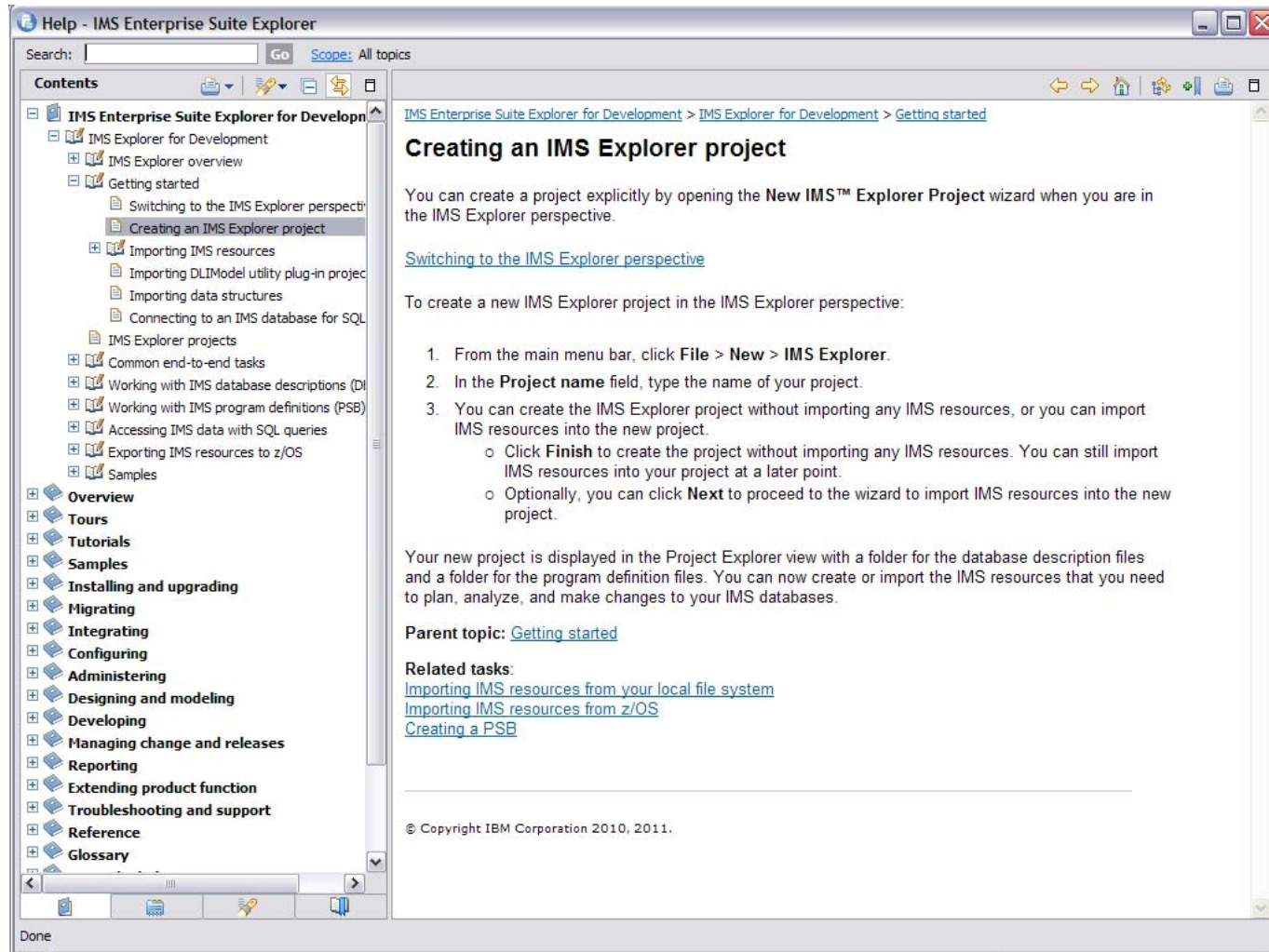
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Welcome Screen



Help with tasks



Welcome Screen

The screenshot shows the 'Welcome' screen of the 'Plug-in Development - IMS Enterprise Suite Explorer' application. The window title bar includes the application name and standard OS window controls. The menu bar contains: File, Edit, Navigate, Search, Project, ClearCase, Run, ClearCase, Window, Help. The main content area is divided into two columns. The left column, titled 'Web Resources', lists several product information sections with icons and brief descriptions. The right column, titled 'Tutorials', features a section for 'IMS Enterprise Suite Explorer for Development (IMS Explorer)' with a 'Tutorials' sub-section and a specific tutorial titled 'Generating the artifacts to enable an IMS application as an ATOM feed'. Below the tutorials is a 'Samples' section with a sub-section for 'IMS Enterprise Suite Explorer for Development (IMS Explorer)' and a 'Sample DBDs' item. A 'More >>' link is visible at the end of the 'Web Resources' list.

Web Resources

Product Information for IMS Enterprise Suite [More >>](#)

- IMS Enterprise Suite**
Resources and support for IMS Enterprise Suite.
- IMS**
Resources and support for IBM Information Management System (IMS).
- IMS Enterprise Suite Explorer**
Resources and support for IMS Enterprise Suite Explorer (IMS Explorer).

Product information for Rational Developer for System z

- Rational Developer for System z**
Resources and support for Rational Developer for System z.
- Rational Developer for System z Information Roadmap**
This roadmap outlines the information resources that are available for installation, administration, and development of Rational Developer for System z.

Tutorials

IMS Enterprise Suite Explorer for Development (IMS Explorer)

- Tutorials**
View video screencasts that demonstrate common IMS Explorer tasks, such as creating an IMS Explorer project, visualizing IMS databases, and accessing IMS data using SQL.
- Generating the artifacts to enable an IMS application as an ATOM feed**
This tutorial walks you through the steps from identifying the application design and feed requirements, generating the required converters and correlator file from a COBOL copybook, to creating a feed in IBM InfoSphere MashupHub. Estimated time: 60 minutes [More >>](#)

Samples

- IMS Enterprise Suite Explorer for Development (IMS Explorer)**
Sample DBDs

Tutorials on the web

Plug-in Development - IMS Enterprise Suite Explorer

File Edit Navigate Search Project ClearCase Run ClearCase Window Help

Welcome

mozilla Firefox Google Chrome Internet Explorer 8 Safari Opera browser

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IMS Explorer - IMS Enterprise Suite Explorer

IMS Explorer: Accessing IMS Data Using SQL?!
From: ReThinkIMS | Jul 27, 2011 | 1,203 views

0:06 / 6:31 360p

Info Favorite Share Flag Like

Uploads (9)

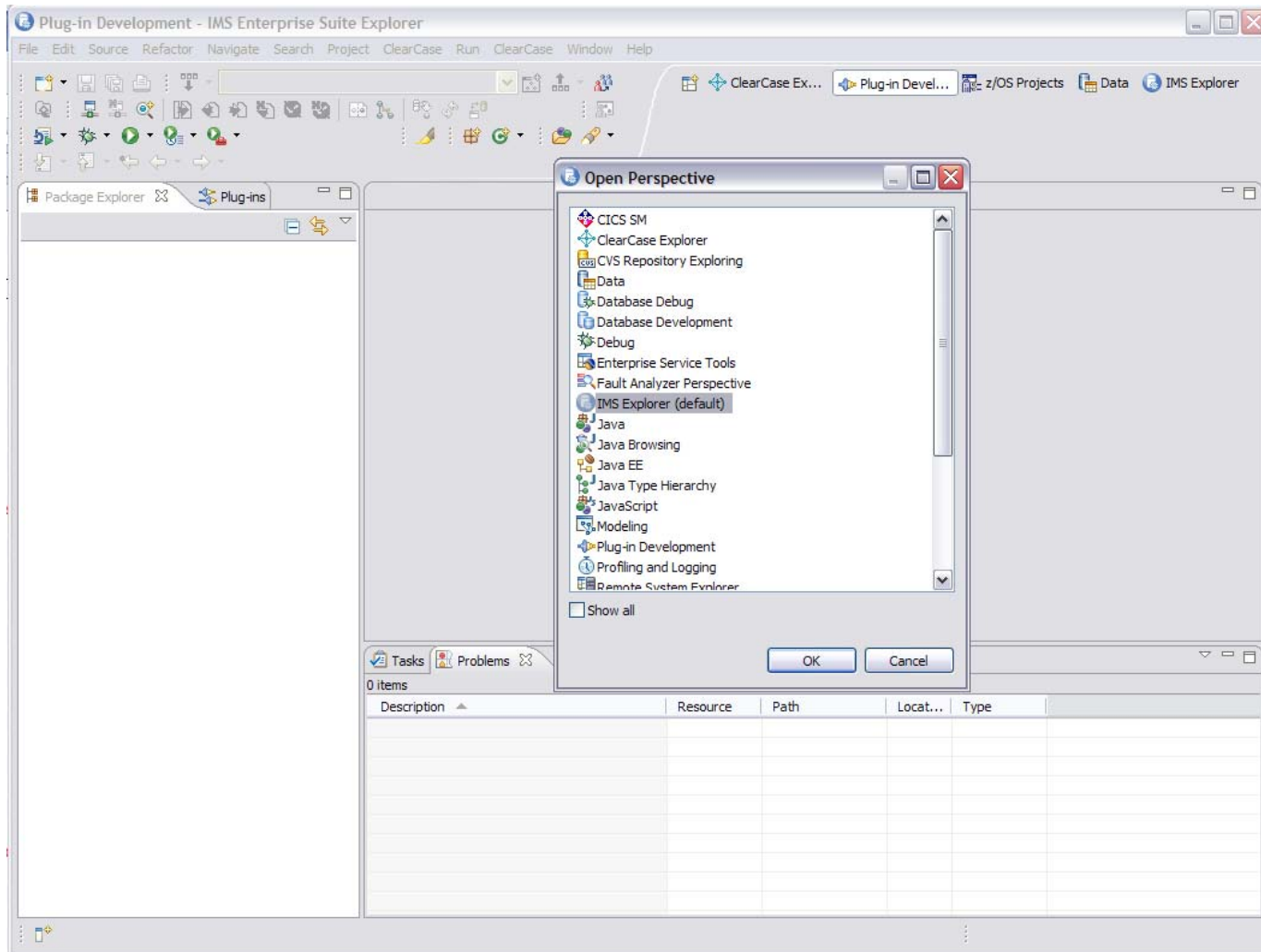
- What Quality Makes IMS Unique? 149 views - 1 month ago
- IMS Explorer: Accessing IMS Data 203 views - 3 months ago
- How Would You Describe IMS to Sir 146 views - 1 month ago

see all

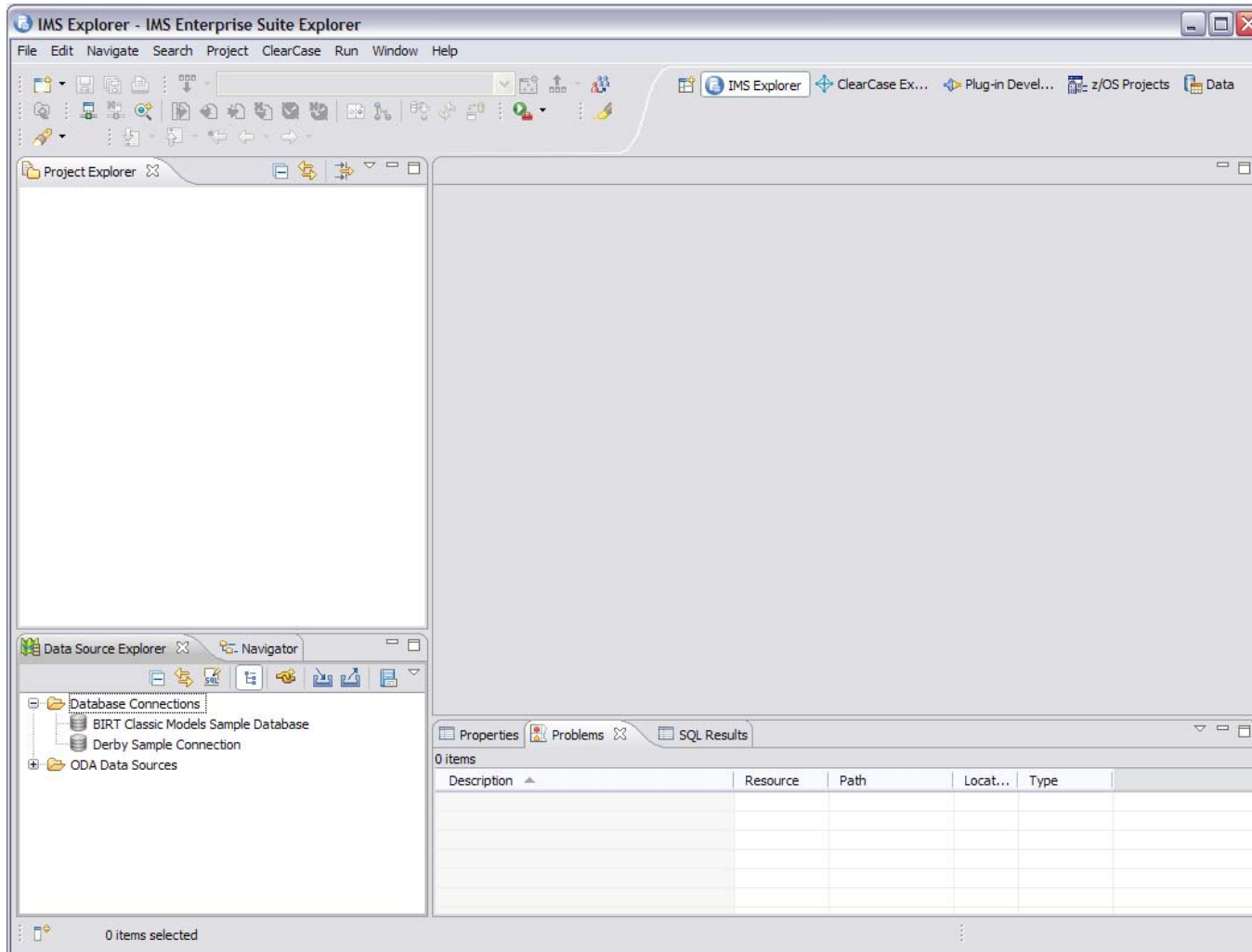
Favorites (10)

- IMS Connectivity and SOA Solutions BlueProdu... - 96 views
- IMS V11 Open Database (in a nutshell) BlueProdu... - 95 views
- Invoking z/OS IMS using iPhone, using rcharosa - 2,373 views

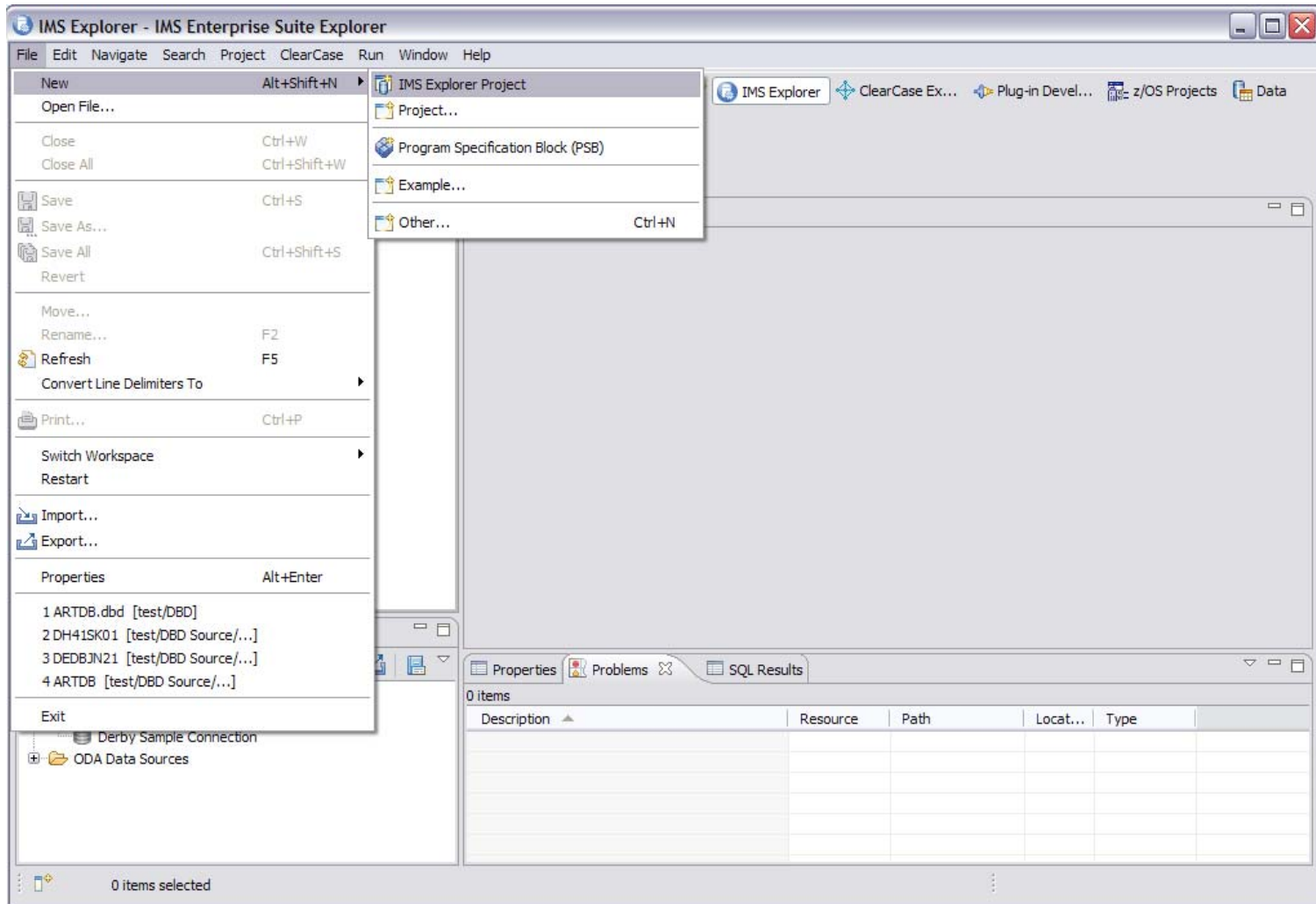
Switching to IMS Explorer perspective



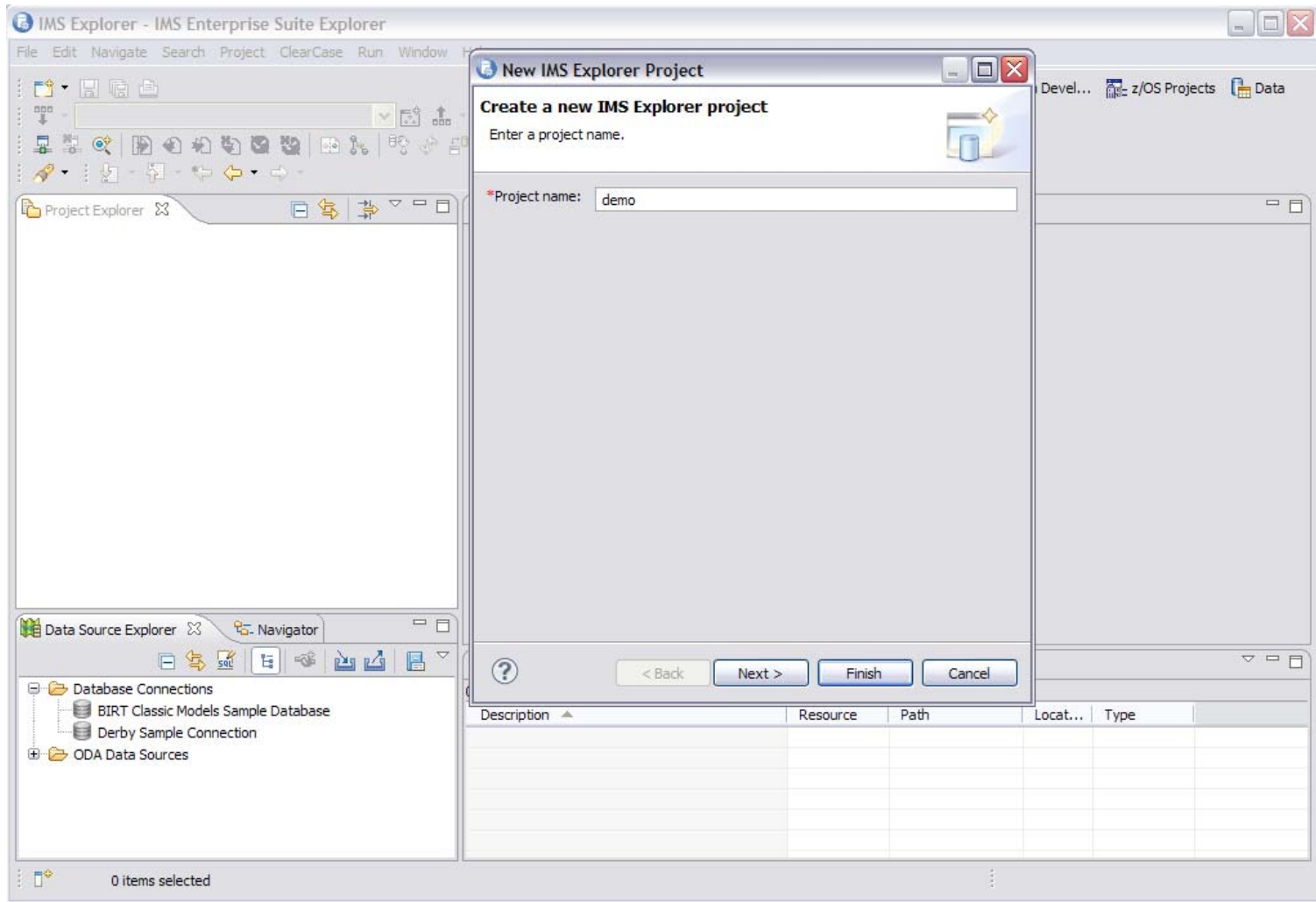
IMS Explorer perspective



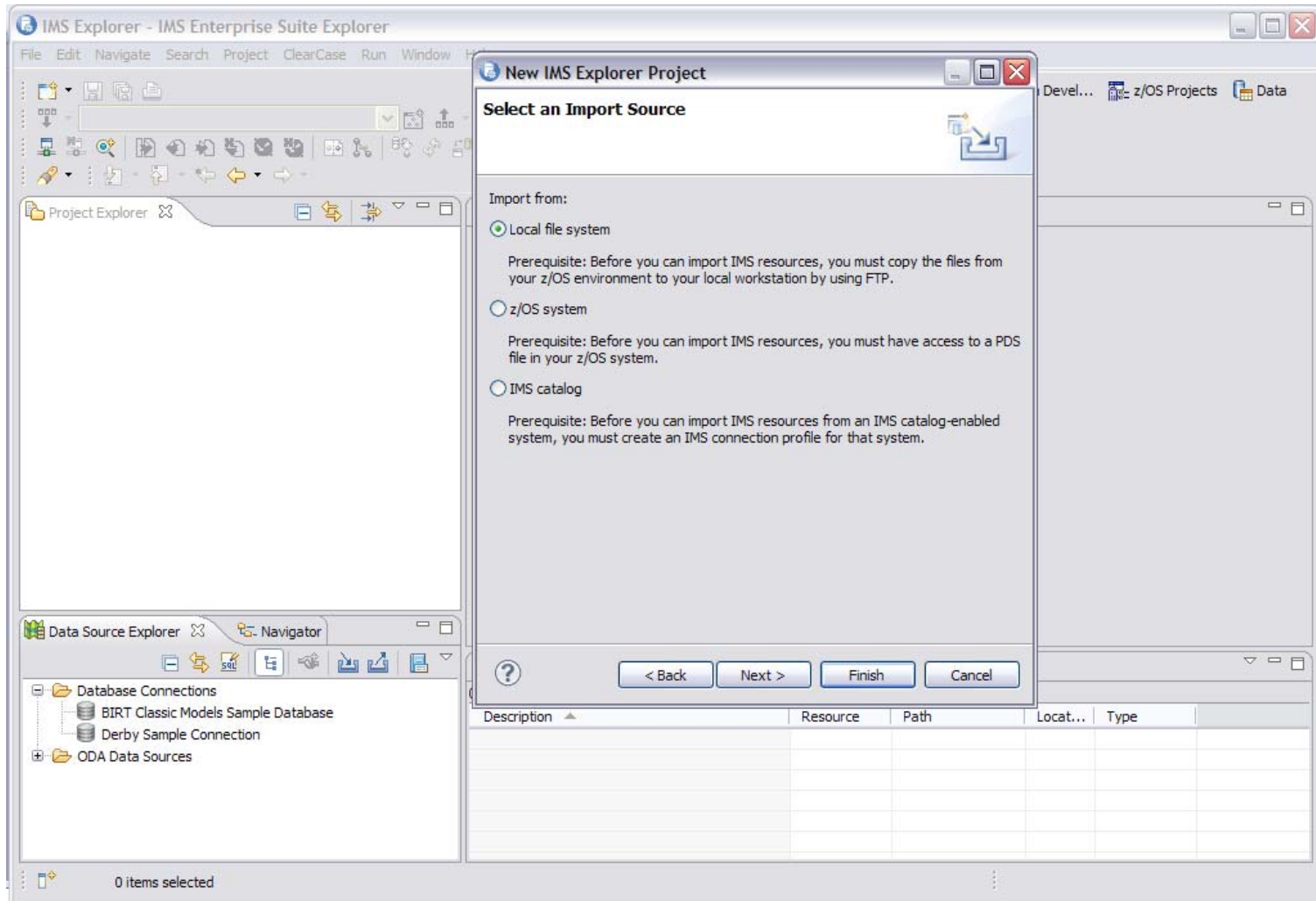
New project



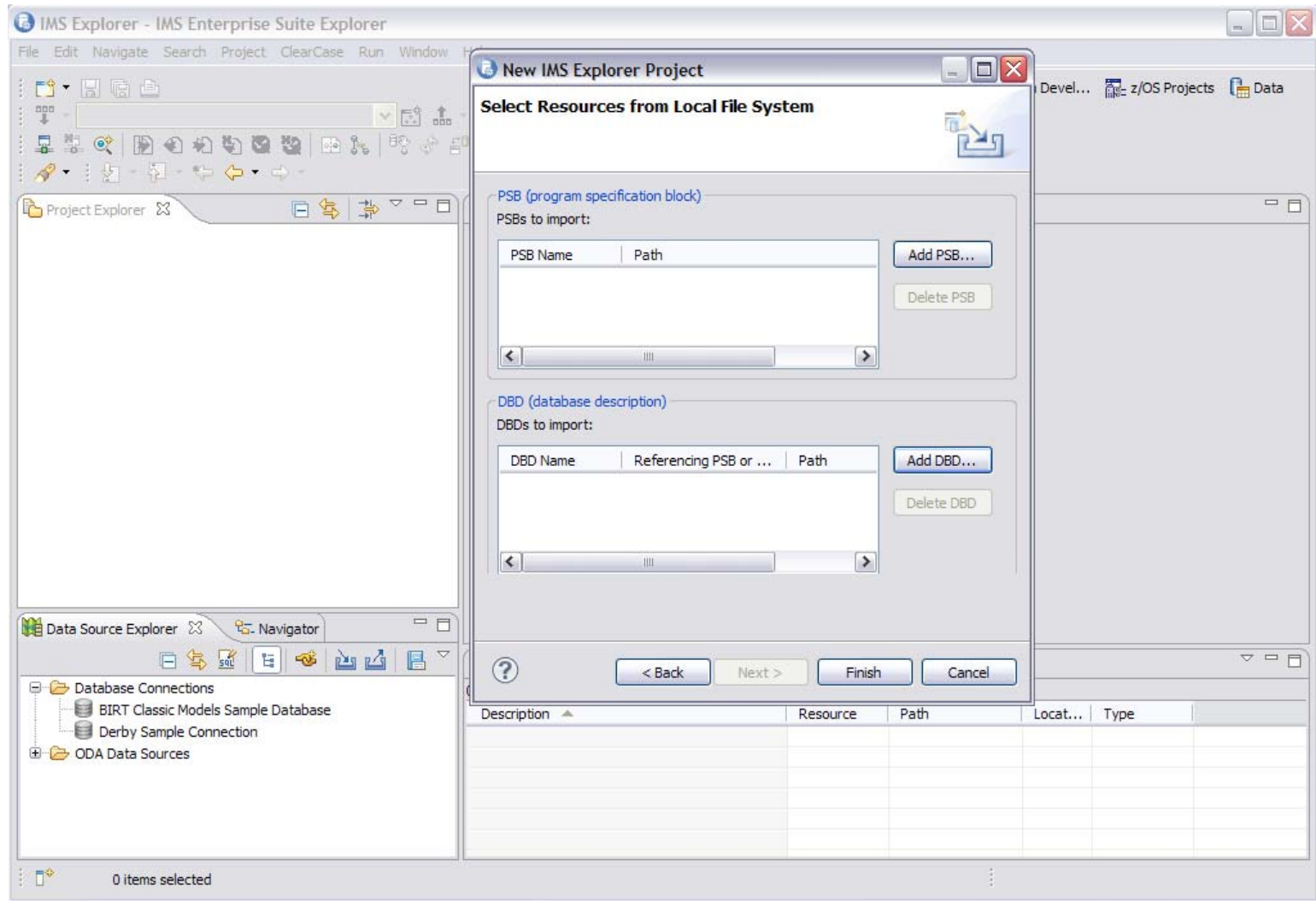
New project



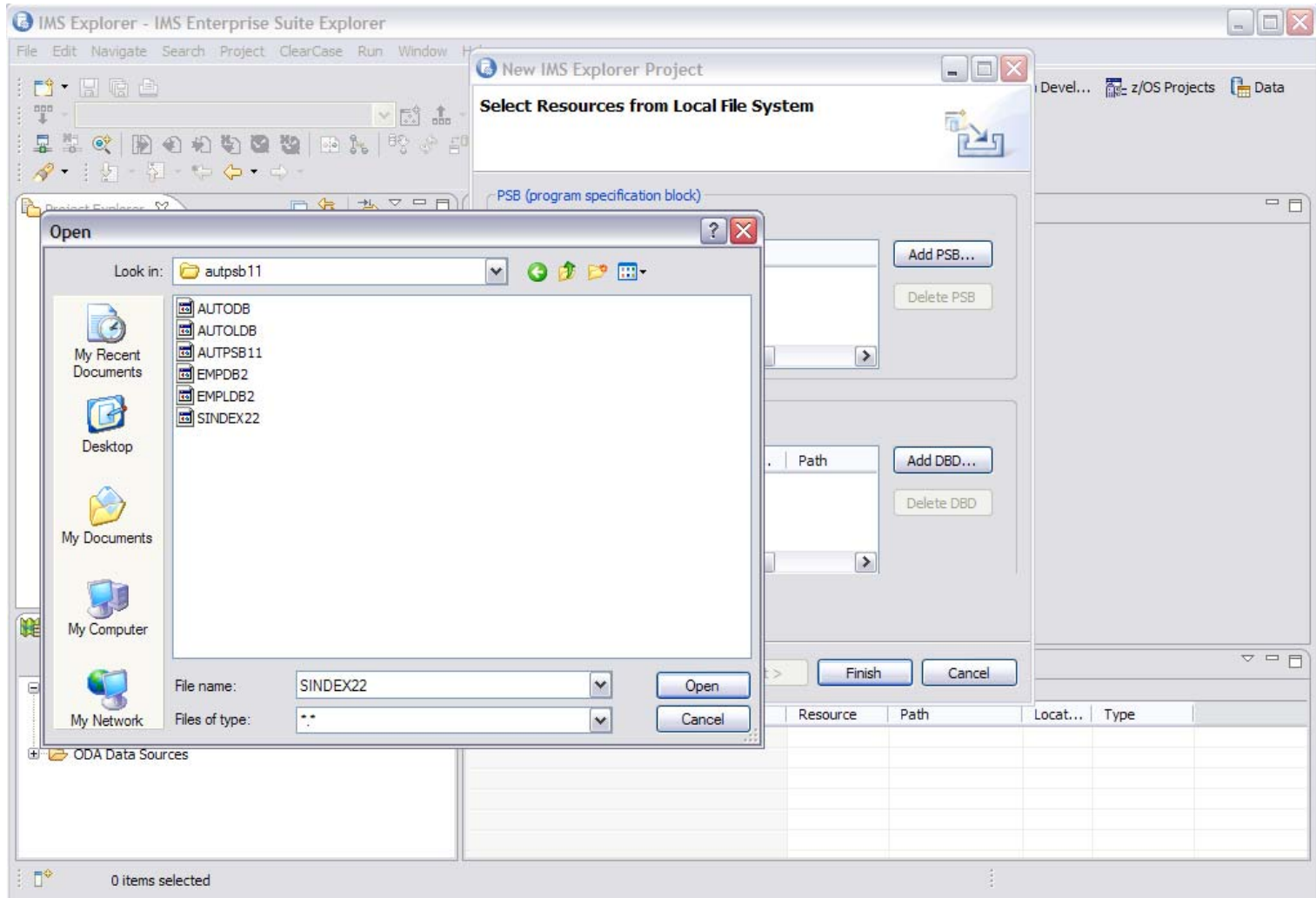
Source import



Source import



Source import



Source import

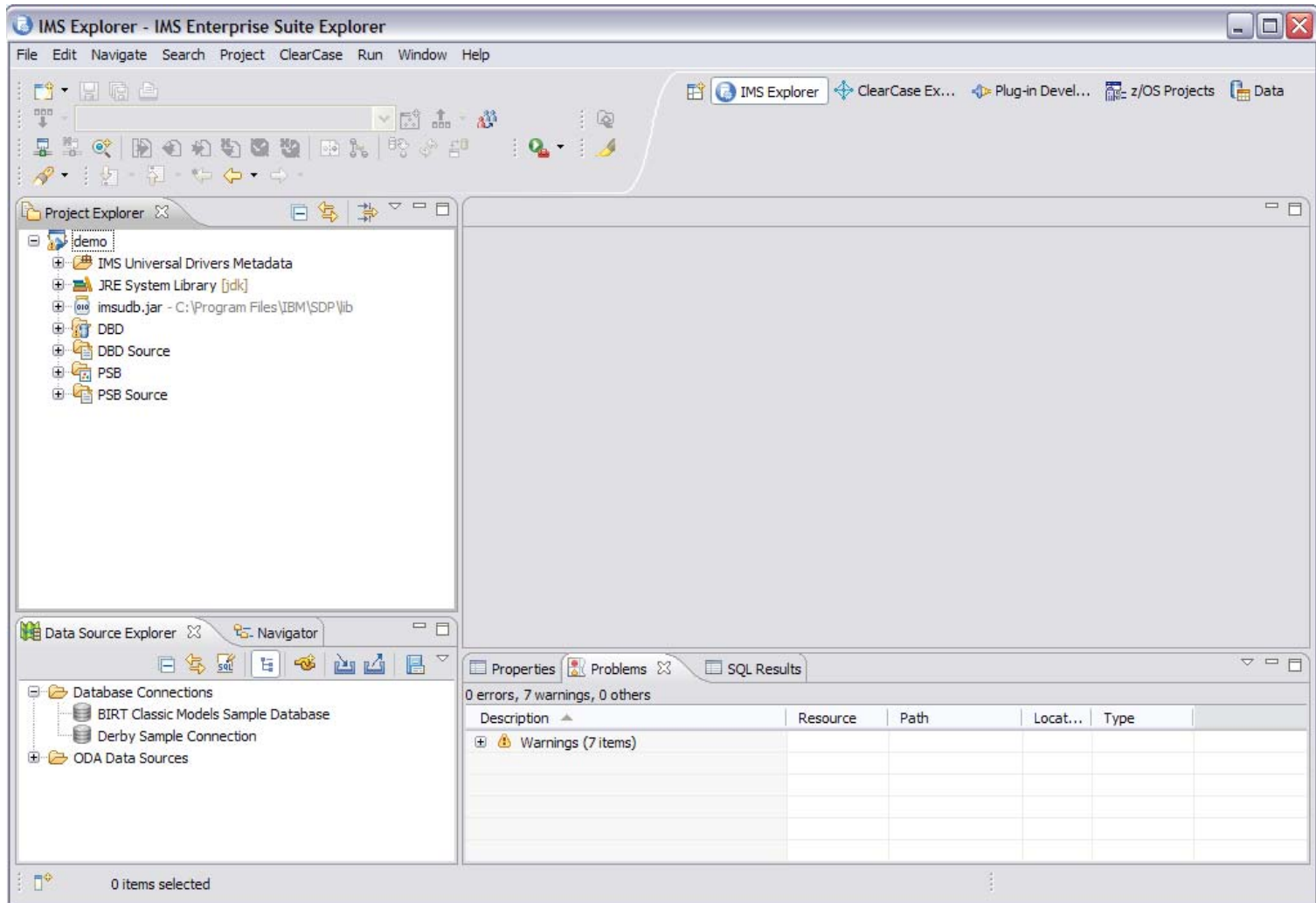
The screenshot shows the 'New IMS Explorer Project' dialog box in the IMS Explorer application. The dialog is titled 'Select Resources from Local File System' and is divided into two sections: 'PSB (program specification block)' and 'DBD (database description)'. The 'PSB' section contains a table with one entry: 'AUTPSB11' at path 'C:\bt\Deep Dive files\autpsb11\AUTPSB'. The 'DBD' section contains a table with four entries: 'EMPLDB2', 'AUTOLDB', 'EMPDDB2', and 'AUTODB', each with its referencing PSB and path. Navigation buttons include '< Back', 'Next >', 'Finish', and 'Cancel'. At the bottom of the dialog, a table with columns 'Description', 'Resource', 'Path', 'Locat...', and 'Type' is visible but empty.

PSB Name	Path
AUTPSB11	C:\bt\Deep Dive files\autpsb11\AUTPSB

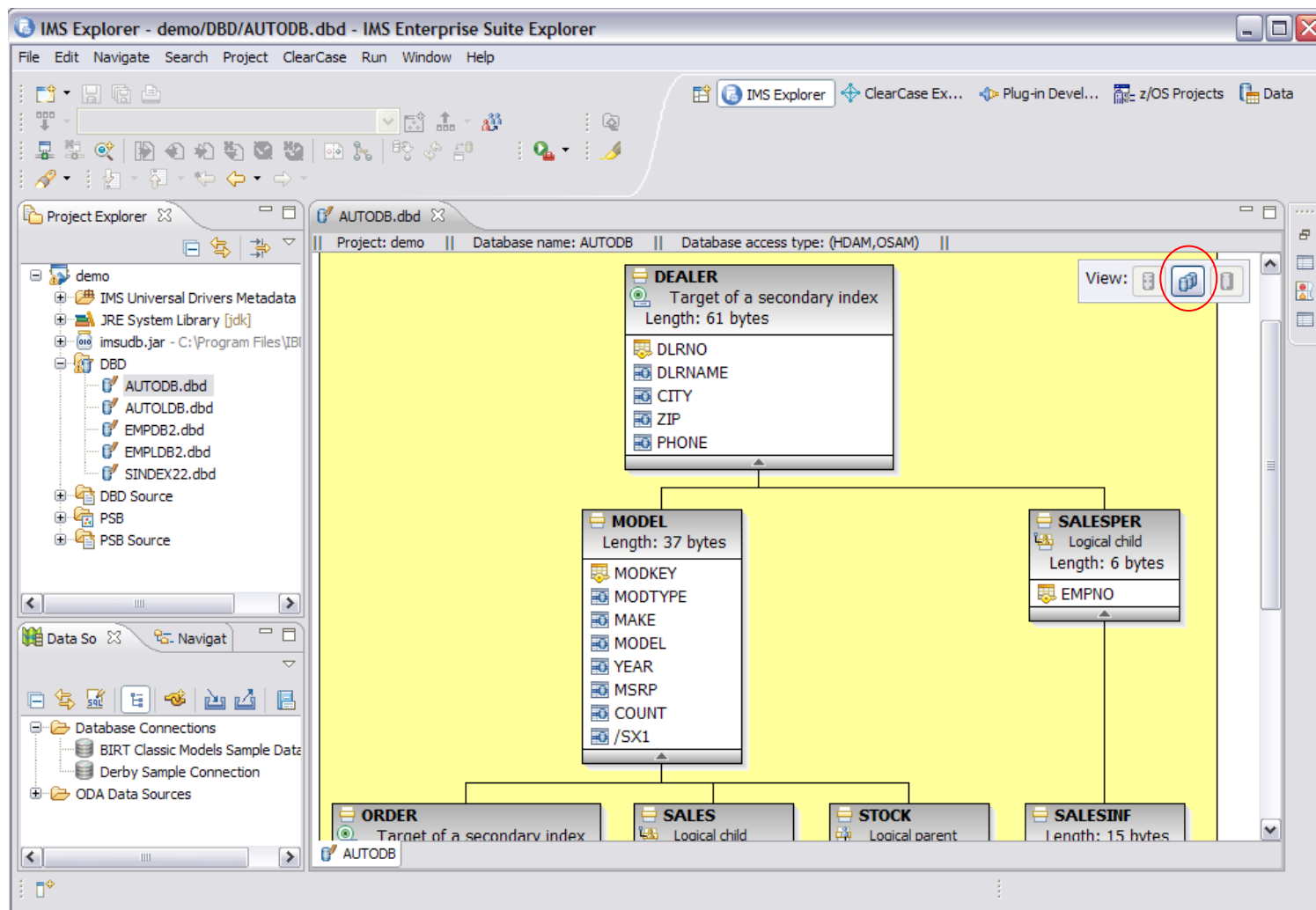
DBD Name	Referencing PSB or ...	Path
EMPLDB2	AUTPSB11	C:\bt\Dee
AUTOLDB	AUTPSB11	C:\bt\Dee
EMPDDB2	EMPLDB2,AUTOLDB	C:\bt\Dee
AUTODB	EMPLDB2,AUTOLDB,E...	C:\bt\Dee

Description	Resource	Path	Locat...	Type

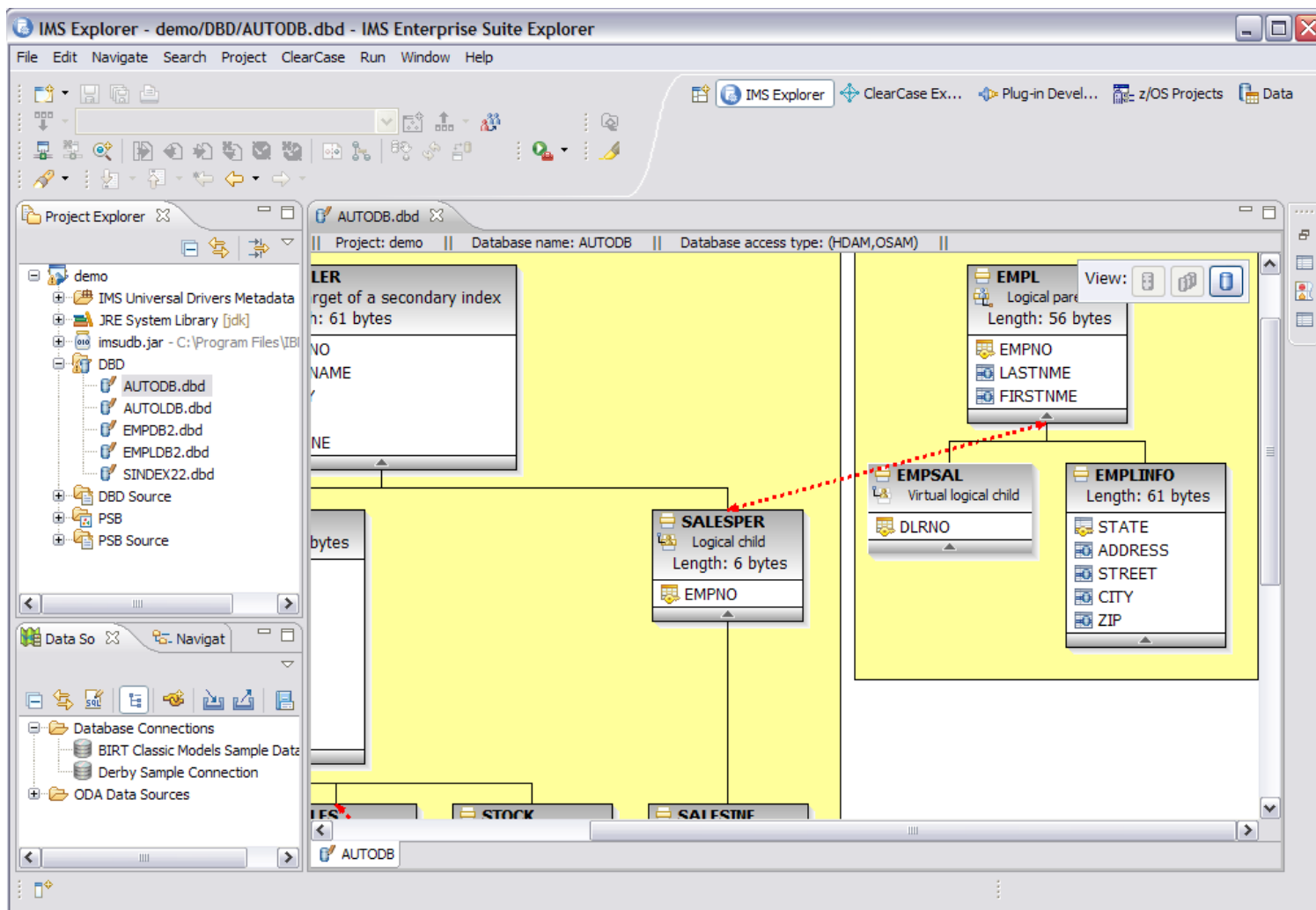
New project created



DBD hierarchic graph



Logical relationships



Properties tab

DBD name: AUTODB

DEALER
Target of a secondary index
Length: 61 bytes

DLRNO
DLRNAME
CITY
ZIP
PHONE

MODEL SALESPEP

Property	Value
1 - Segment (SEGM)	
Alias (EXTERNALNAME)	DEALER
Character encoding (ENCODING)	
Data Capture exit routines (EXIT)	
Length (BYTES)	61
Parent segment (PARENT)	0

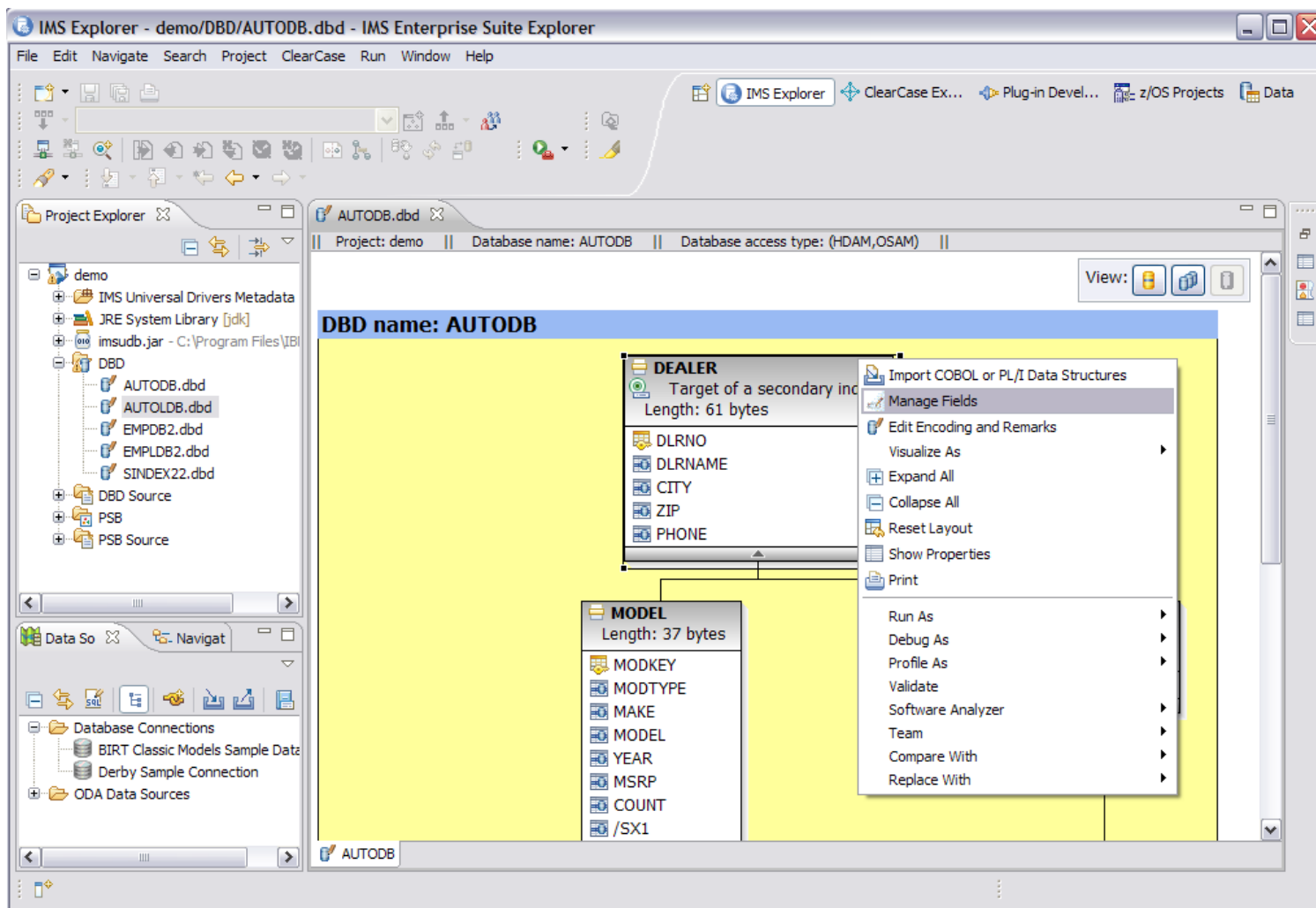
Properties tab

The screenshot shows the IMS Explorer interface with the following components:

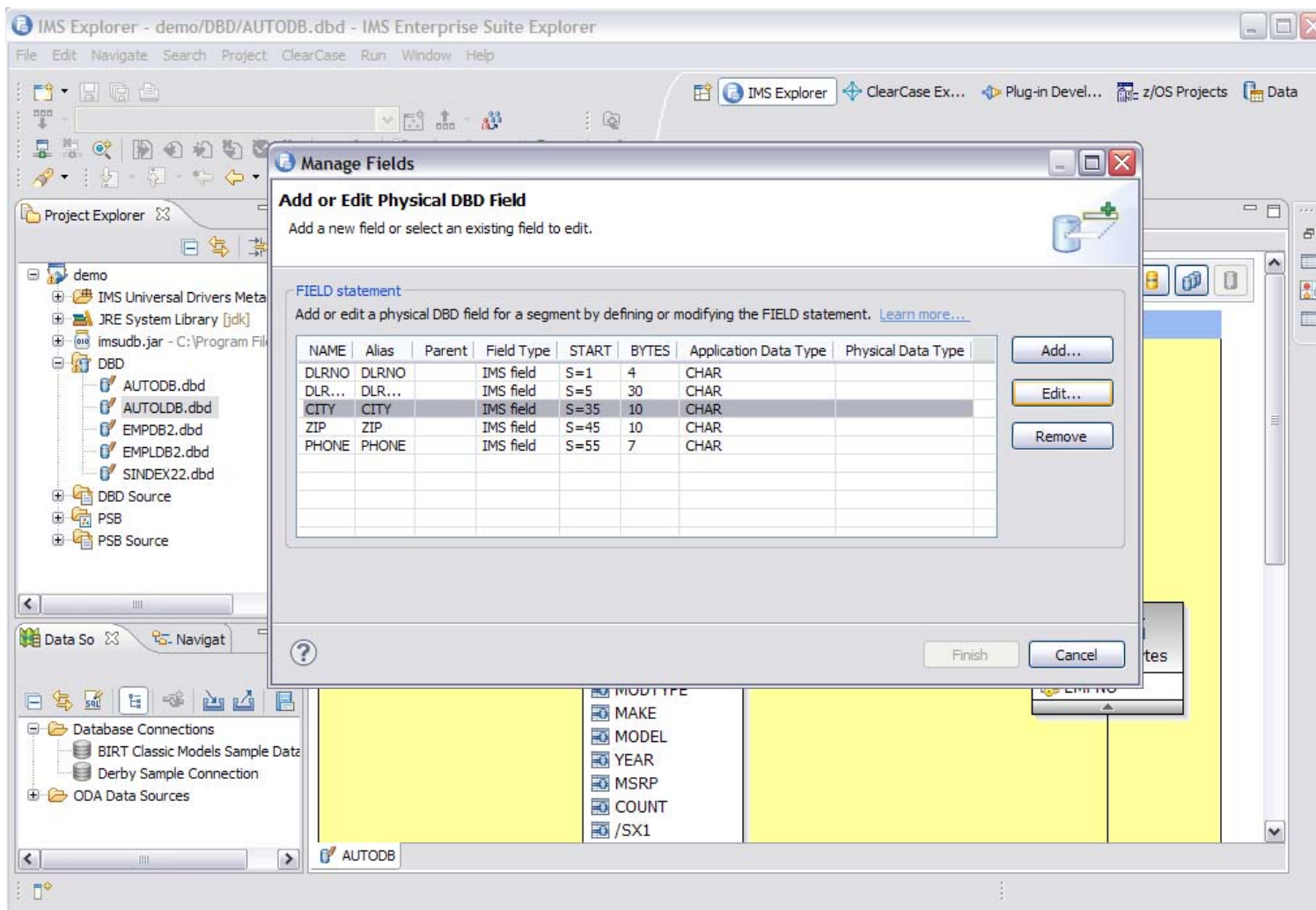
- Project Explorer:** Shows a tree view of the project structure, including 'demo', 'IMS Universal Drivers Metadata', 'JRE System Library [jdk]', 'imsudb.jar', and 'DBD' subfolders containing 'AUTODB.dbd', 'AUTOLDB.dbd', 'EMPDB2.dbd', 'EMPLDB2.dbd', and 'SINDEX22.dbd'.
- Database Information:** At the top of the main pane, it displays 'Project: demo', 'Database name: AUTODB', and 'Database access type: (HDAM,OSAM)'.
- Diagram:** A diagram showing a 'DEALER' field (Target of a secondary index, Length: 61 bytes) associated with 'MODEL' and 'SALESPER' tables. The 'DEALER' field is linked to 'DLRNO', 'DLRNAME', 'CITY', 'ZIP', and 'PHONE' fields.
- Properties Tab:** A table showing the properties of the selected field (Alias (EXTERNALNAME)).

Property	Value
Field (FIELD)	
Alias (EXTERNALNAME)	DLRNAME
Application data type	CHAR
Character encoding (ENCODING)	
Field name (NAME)	DLRNAME
Field type	IMS field

Manage fields



Manage fields



Manage fields

The screenshot shows the IMS Explorer interface with the 'Edit Field' dialog box open. The dialog is titled 'Edit Field' and 'Specify Field Attributes'. It contains the following fields and options:

- Field type:** Radio buttons for 'User-defined field' and 'IMS field' (selected).
- * Field name (NAME):** Text box containing 'CITY'.
- Alias:** Text box containing 'CITY'.
- * Starting position (START):** Text box containing '35'.
- * Length (BYTES):** Text box containing '5'.
- Sequence field (SEQ):** Dropdown menu.
- IMS data type (TYPE):** Dropdown menu showing 'C (Character)'.
- Remarks:** A large text area for notes.

At the bottom of the dialog are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. In the background, the 'Manage Fields' pane shows a table of field definitions:

NAME	Alias
DLRNO	DLRNO
DLR...	DLR...
CITY	CITY
ZIP	ZIP
PHONE	PHONE

Generated source

The screenshot displays the IMS Explorer application window. The title bar reads "IMS Explorer - demo/DBD Source/Imported Source/AUTODB - IMS Enterprise Suite Explorer". The menu bar includes File, Edit, Navigate, Search, Project, ClearCase, Run, Window, and Help. The Project Explorer on the left shows a tree structure with folders for "demo", "DBD", "DBD Source", and "Imported Source". Under "DBD Source", there is a "Generated Source" folder containing files like AUTODB, AUTOLDB, EMPDB2, EMPLDB2, and SINDEXT2. The central editor pane shows the source code for AUTODB.dbd, listing fields such as FRSPC, SEARCHA, SEGM, and various FIELD definitions with attributes like NAME, PARENT, BYTES, START, and TYPE. A red oval highlights the following field definitions:

```

FIELD NAME=(DLRNO,SEQ,U) ,
  BYTES=4,
  START=1,
  TYPE=C
FIELD NAME=(DLRNAME) ,
  BYTES=30,
  START=5,
  TYPE=C
FIELD NAME=(CITY) ,
  BYTES=5,
  START=35,
  TYPE=C
FIELD NAME=(ZIP) ,
  BYTES=10,
  START=45,
  TYPE=C
FIELD NAME=(PHONE) ,
  BYTES=7,
  START=55,
  TYPE=C
LCHILD NAME=(SINDXB,SINDEX22)
  POINTER=INDX,
  SUBSEQUENCE=1
  
```

The right-hand pane shows a dataset definition for AUTODB, including parameters like NAME, ACCESS, HDAM, OSAM, RMNAME, and DATASET DD1=DFSDDL. It also lists segments and fields, including the same field definitions seen in the central pane.

Logical DB, Concatenated segments

The screenshot displays the IMS Explorer interface for a logical database named AUTOLDB. The main window shows a hierarchical tree structure of segments and their concatenated fields. The database is accessed via a logical path /SX1.

Database Information:
 Project: demo | Database name: AUTOLDB | Database access type: LOGICAL | Path: /SX1

Segments and their concatenated fields:

- RDER** (Length: 74 bytes)

AUTOLDB.ORDER	
RDNBR	
ASTNME	
IRSTNME	
ATE	
IME	
- SALES** (Length: 131 bytes)

AUTOLDB.SALES	
SALENUM	
SALDATE	
LASTNME	
- STOCK** (Length: 46 bytes)

AUTOLDB.STOCK	
STKVIN	
COLOR	
PRICE	
LOT	
WRNTY	
- SALESINF** (Length: 15 bytes)

AUTOLDB.SALESINF	
QUOTA	
SALESYTD	
COMSSION	
- STOCSALE** (Length: 36 bytes)

AUTOLDB.STOCSALE	
DLRNO	
SALENUM	
MODKEY	
SALDATE	
LASTNME	
- AUTOLDB.MODEL** (Length: 36 bytes)

MODKEY	
--------	--

The diagram shows that the **STOCSALE** segment is concatenated with the **AUTOLDB.MODEL** segment. The **SALES** and **STOCK** segments are concatenated with the **STOCSALE** segment. The **RDER** segment is concatenated with the **SALES** and **STOCK** segments. The **SALESINF** segment is concatenated with the **SALES** segment.

PSB Summary Page

IMS Explorer - demo/PSB/AUTPSB11.psb - IMS Enterprise Suite Explorer

File Edit Navigate Search Project ClearCase Run Window Help

Project Explorer

- demo
 - IMS Universal Drivers Metadata
 - JRE System Library [jdk]
 - imsudb.jar - C:\Program Files\IBM
 - DBD
 - DBD Source
 - PSB
 - AUTPSB11.psb
 - PSB Source

AUTPSB11.psb

Project: demo || PSB name: AUTPSB11 ||

Full-function or Fast Path database PCB statement (TYPE=DB)
 The PCB statement describes a PCB for a DL/I or a Fast Path database. [Learn more...](#)

PCB Nu...	PCB Na...	DBDNA...	PROC...	SB	KEYLEN	POS	PROCS...	VIEW=...	LIST	PSELOPT
1	AUTOL...	AUTOLDB	AP	No	100	Single		No	Yes	
2	AUTS1P...	AUTOLDB	GRP	No	100	Single	SINDEX11	No	Yes	
3	AUTS2P...	AUTOLDB	GRP	No	64	Single	SINDEX22	No	Yes	
4	AUSI2PCB	SINDEX22	GRDP	No	28	Single		No	Yes	
5	EMPLPCB	EMPLDB2	AP	No	10	Single		No	Yes	

Summary

PSB Summary Page

IMS Explorer - demo/PSB/AUTPSB11.psb - IMS Enterprise Suite Explorer

File Edit Navigate Search Project ClearCase Run Window Help

IMS Explorer ClearCase Ex... Plug-in Devel... z/OS Projects Data

AUTPSB11.psb

Project: demo PSB name: AUTPSB11

Full-function or Fast Path database PCB statement (TYPE=DB)
 The PCB statement describes a PCB for a DL/I or a Fast Path database. [Learn more...](#)

PCB Nu...	PCB Name	DBDNA...	PROC...	SB	KEYLEN	POS	PROCS...	VIEW=...	LIST	PSELOPT	AC
1	AUTOLPCB	AUTOLDB	AP	No	100	Single		No	Yes		
2	AUTS1PCB	AUTOLDB	GRP	No	100	Single	SINDEX11	No	Yes		
3	AUTS2PCB	AUTOLDB	GRP	No	64	Single	SINDEX22	No	Yes		
4	AUSI2PCB	SINDEX22	GRDP	No	28	Single		No	Yes		
5	EMPLPCB	EMPLDB2	AP	No	10	Single		No	Yes		

Add... Edit... Remove Edit data sensitivity...

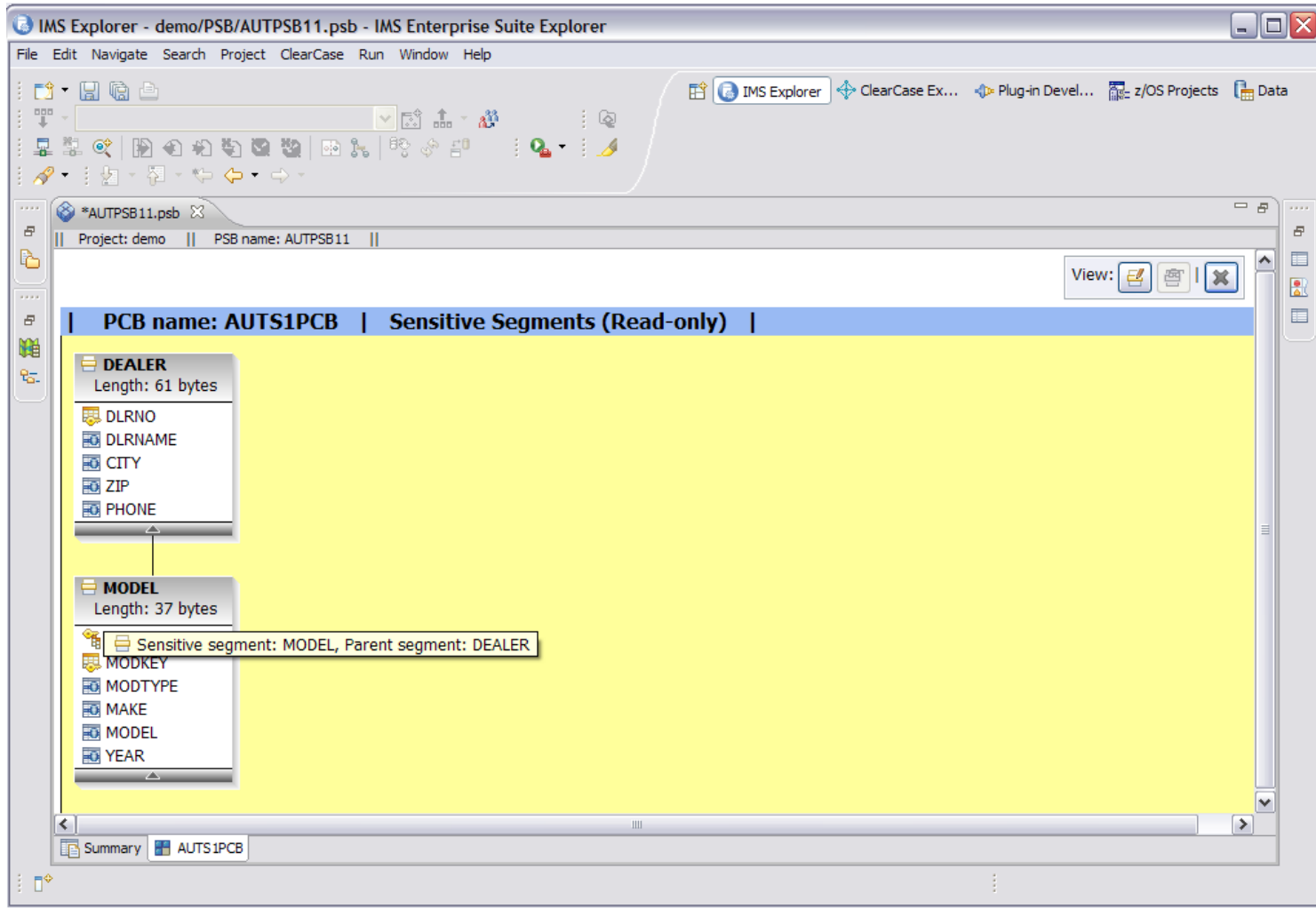
Summary

Edit segment/field sensitivity

The screenshot shows the IMS Explorer interface for a project named 'demo' and PSB 'AUTPSB11'. The main window displays the PCB 'AUTS1PCB' with the title 'All Segments (Edit Sensitivity)'. A yellow background highlights the segment tree. Three segments are visible: 'DEALER' (61 bytes), 'MODEL' (37 bytes), and 'SALESPER' (62 bytes). Each segment has a list of fields with checkboxes for edit sensitivity. A red circle highlights the 'View' menu in the top right corner, which contains icons for 'Edit Sensitivity' and 'Refresh'.

Segment	Length	Field	Edit Sensitivity
DEALER	61 bytes	DLRNO	<input checked="" type="checkbox"/>
		DLRNAME	<input checked="" type="checkbox"/>
		CITY	<input checked="" type="checkbox"/>
		ZIP	<input checked="" type="checkbox"/>
		PHONE	<input checked="" type="checkbox"/>
MODEL	37 bytes	MODKEY	<input checked="" type="checkbox"/>
		MODTYPE	<input checked="" type="checkbox"/>
		MAKE	<input checked="" type="checkbox"/>
		MODEL	<input checked="" type="checkbox"/>
		YEAR	<input checked="" type="checkbox"/>
		MSRP	<input type="checkbox"/>
		COUNT	<input type="checkbox"/>
SALESPER	62 bytes	EMPNO	<input type="checkbox"/>
		EMPNO	<input type="checkbox"/>
		LASTNME	<input type="checkbox"/>
		FIRSTNME	<input type="checkbox"/>

Edit segment/field sensitivity



Create new PSB

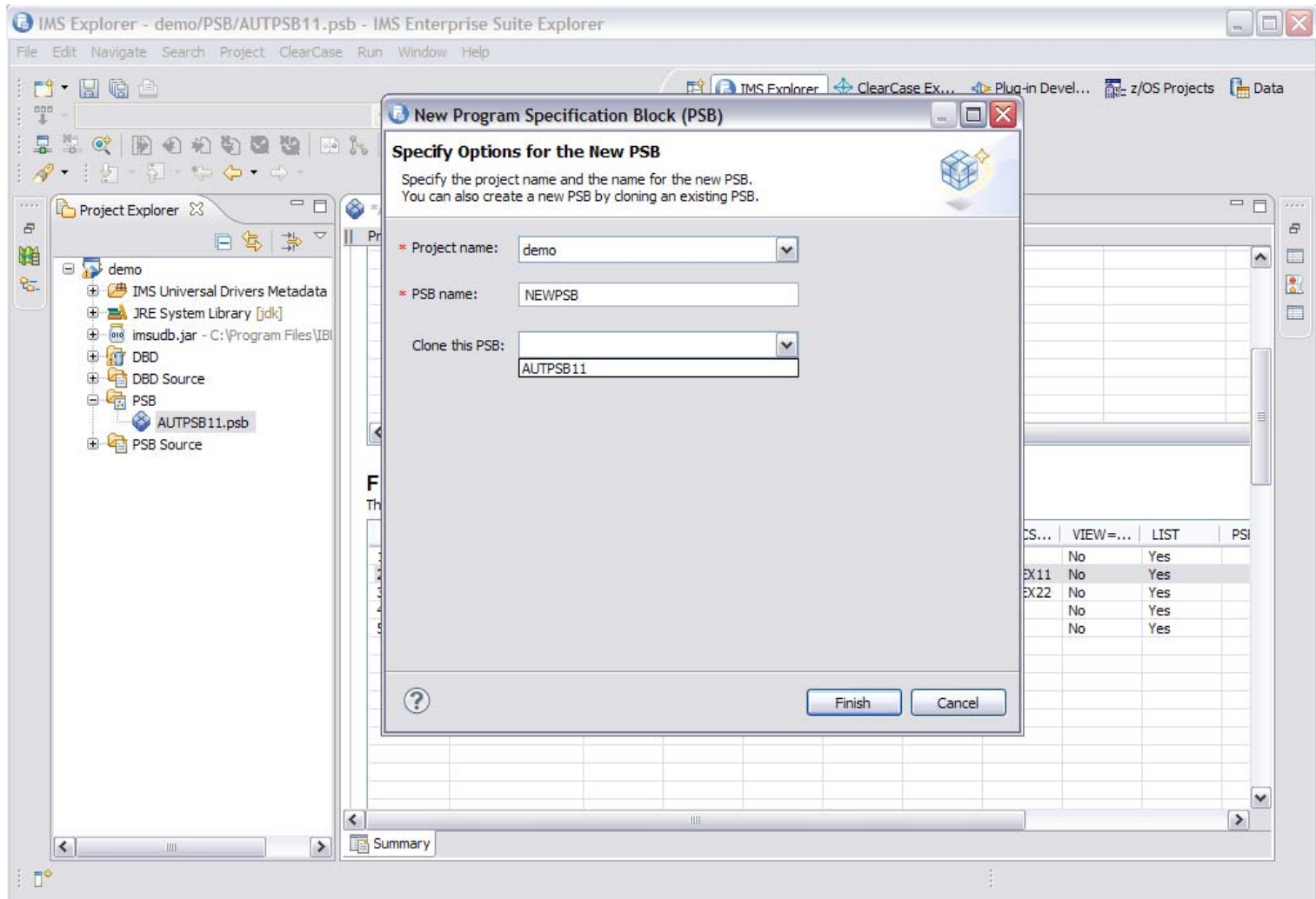
The screenshot shows the IMS Explorer application window titled "demo/PSB/AUTPSB11.psb - IMS Enterprise Suite Explorer". The "File" menu is open, and the "New" option is selected, which has opened a sub-menu where "Program Specification Block (PSB)" is highlighted. Other options in the sub-menu include "IMS Explorer Project", "Project...", "Example...", and "Other..." (Ctrl+N).

The main workspace displays a table titled "Full-function or Fast Path database PCB statement (TYPE=DB)". Below the title is a brief description: "The PCB statement describes a PCB for a DL/I or a Fast Path database. [Learn more...](#)".

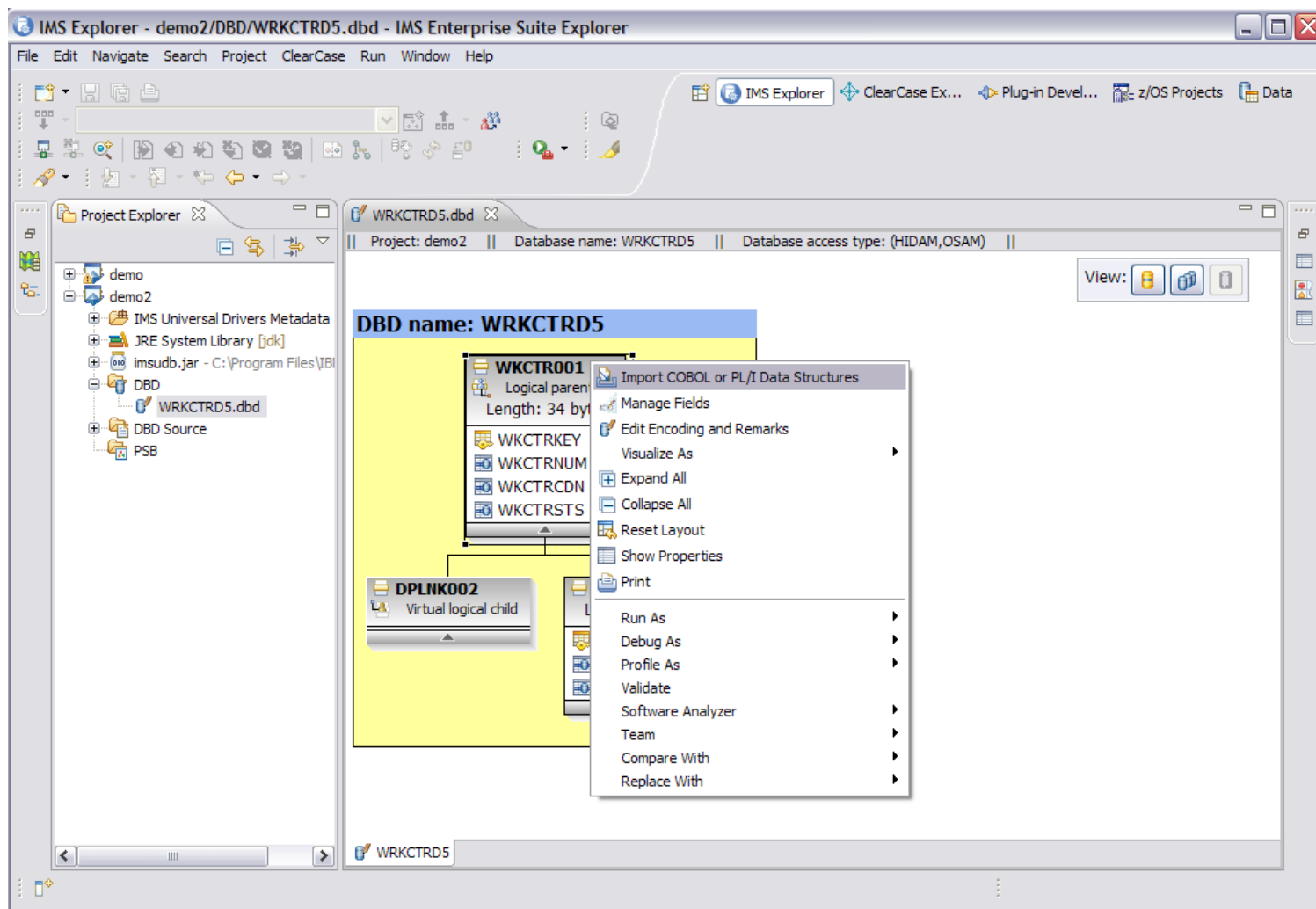
PCB Nu...	PCB Name	DBDNA...	PROC...	SB	KEYLEN	POS	PROCS...	VIEW=...	LIST	PSI
1	AUTOLPCB	AUTOLDB	AP	No	100	Single		No	Yes	
2	AUTS1PCB	AUTOLDB	GRP	No	100	Single	SINDEX11	No	Yes	
3	AUTS2PCB	AUTOLDB	GRP	No	64	Single	SINDEX22	No	Yes	
4	AUSI2PCB	SINDEX22	GRDP	No	28	Single		No	Yes	
5	EMPLPCB	EMPLDB2	AP	No	10	Single		No	Yes	

At the bottom of the window, there is a "Summary" tab and a scroll bar.

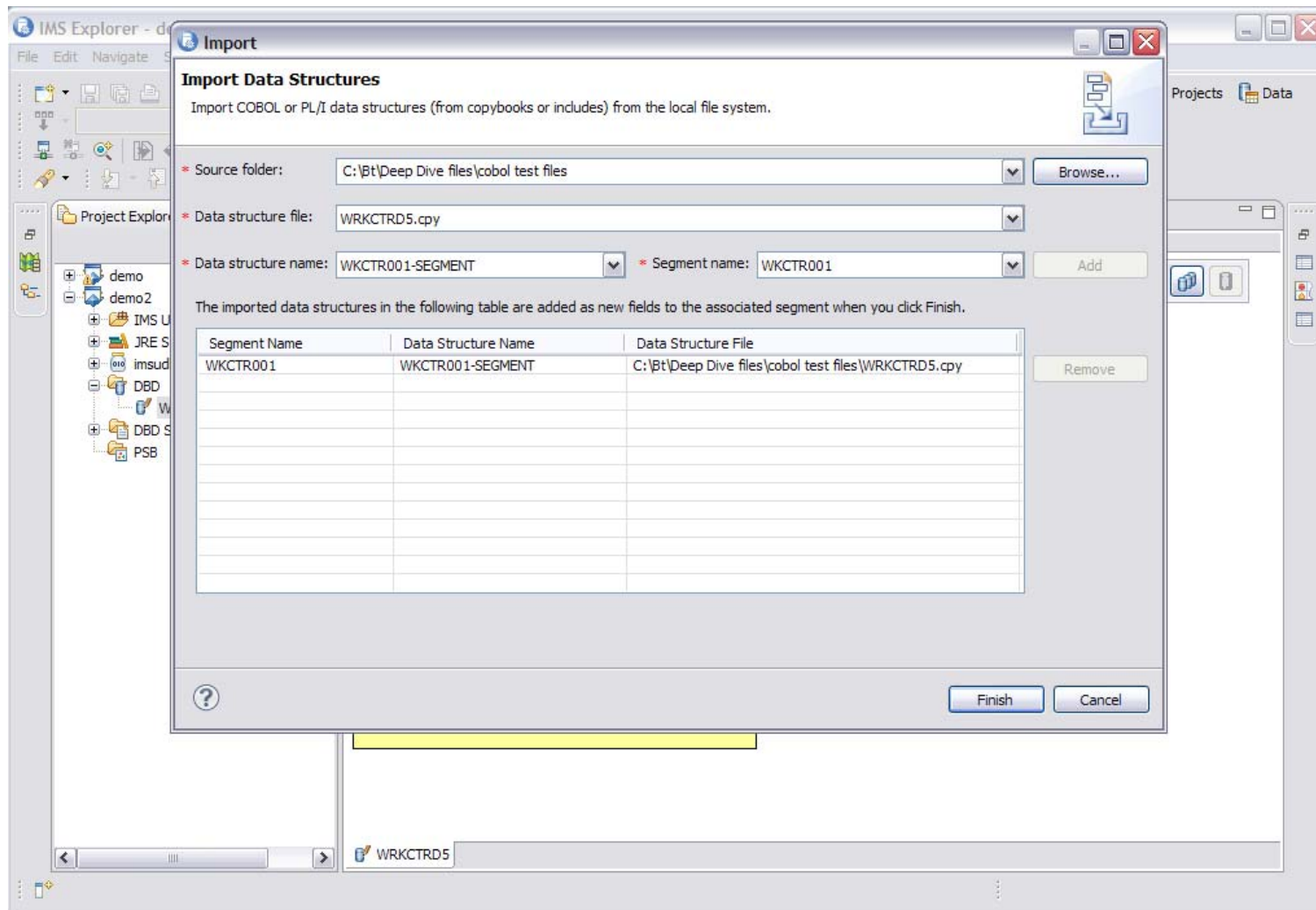
Create new PSB



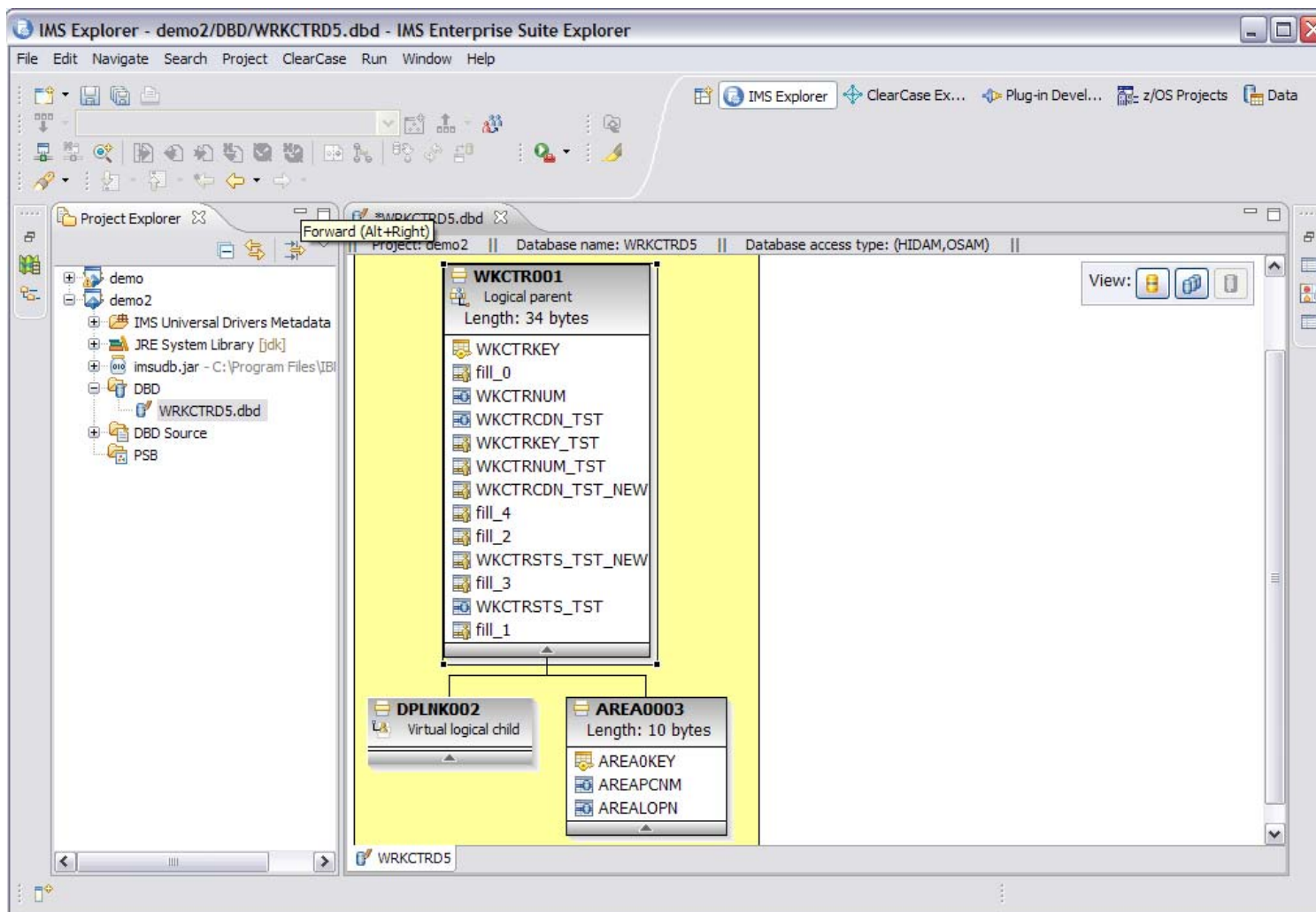
Import copybook structure



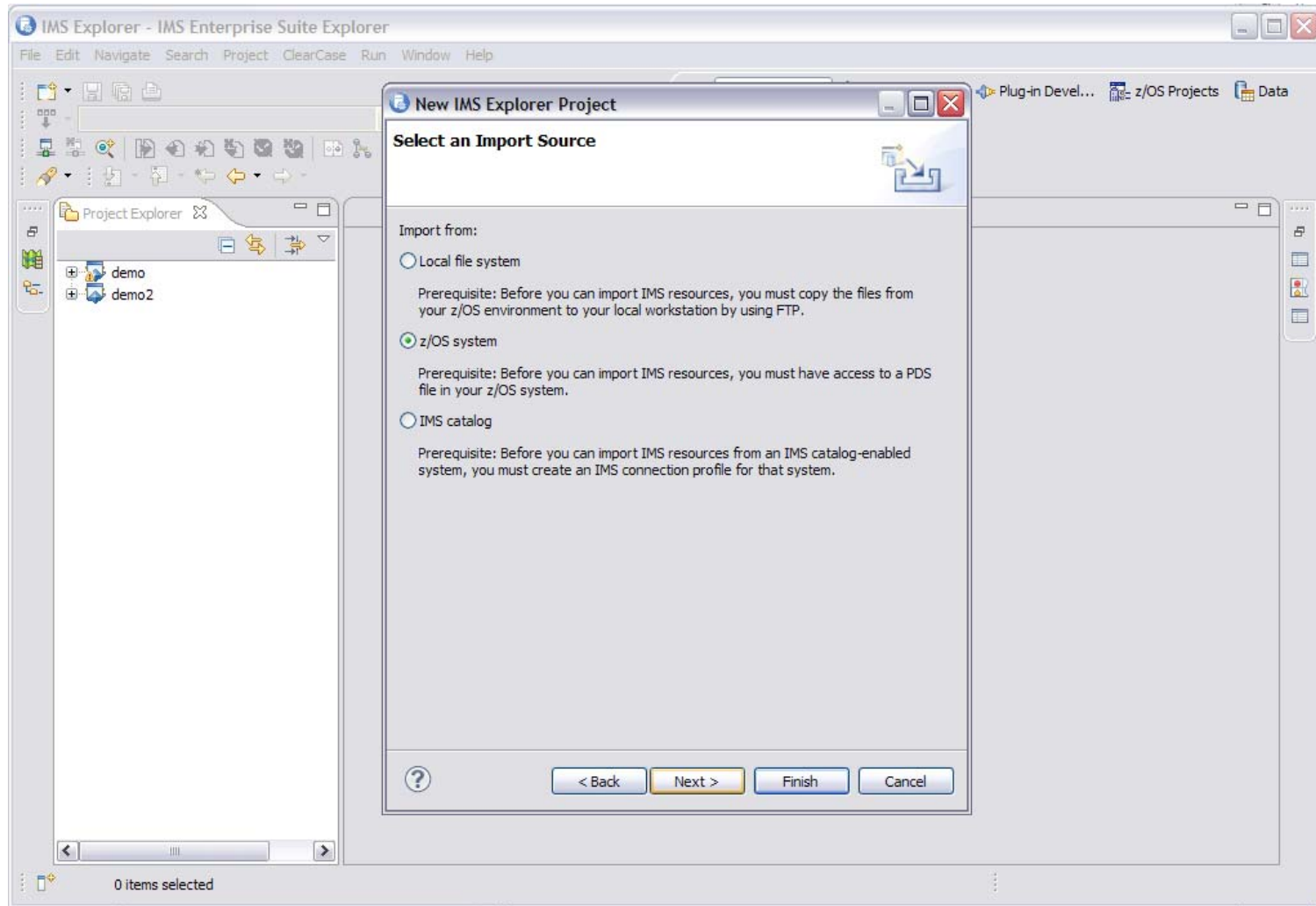
Import copybook structure



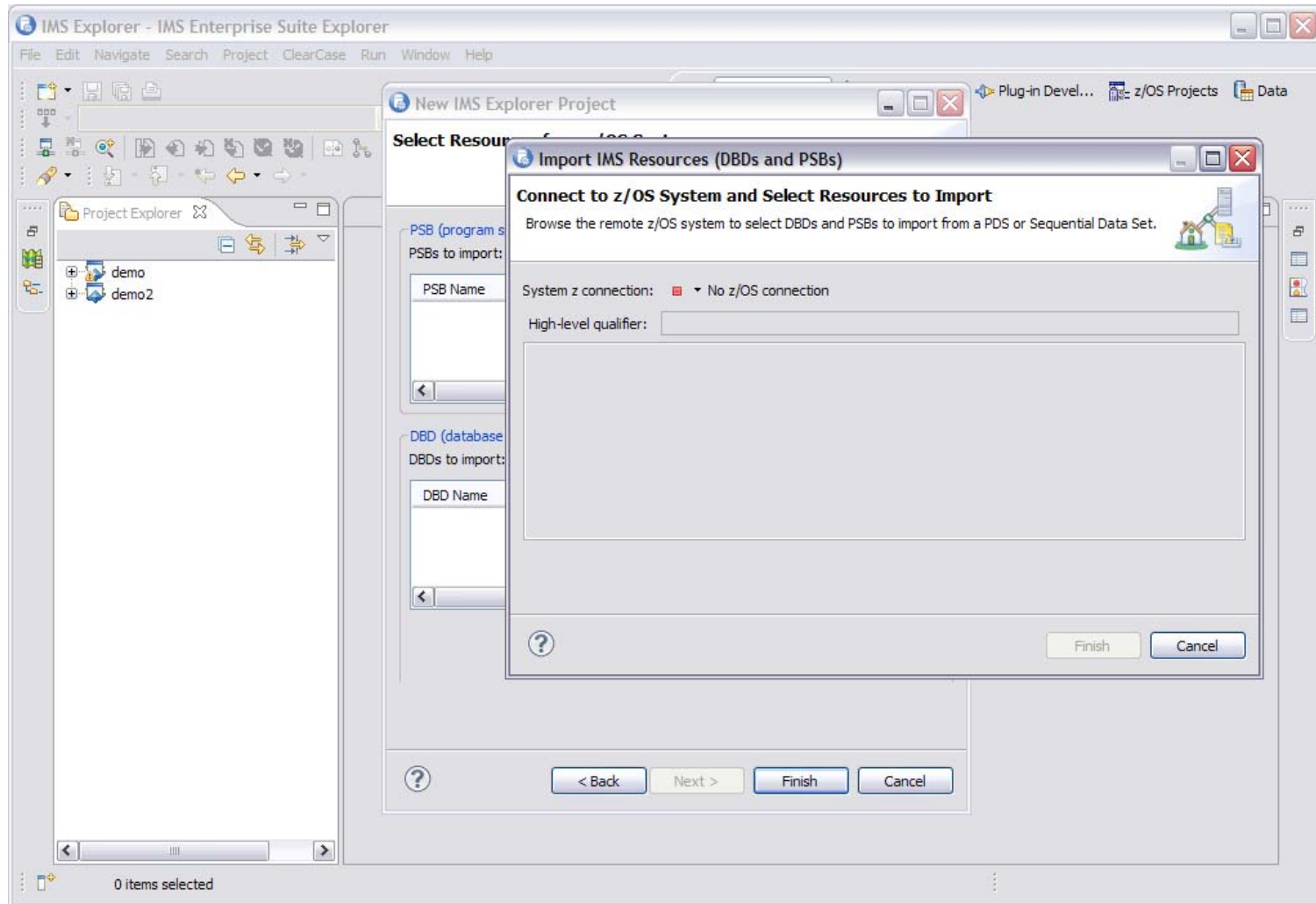
Import copybook structure



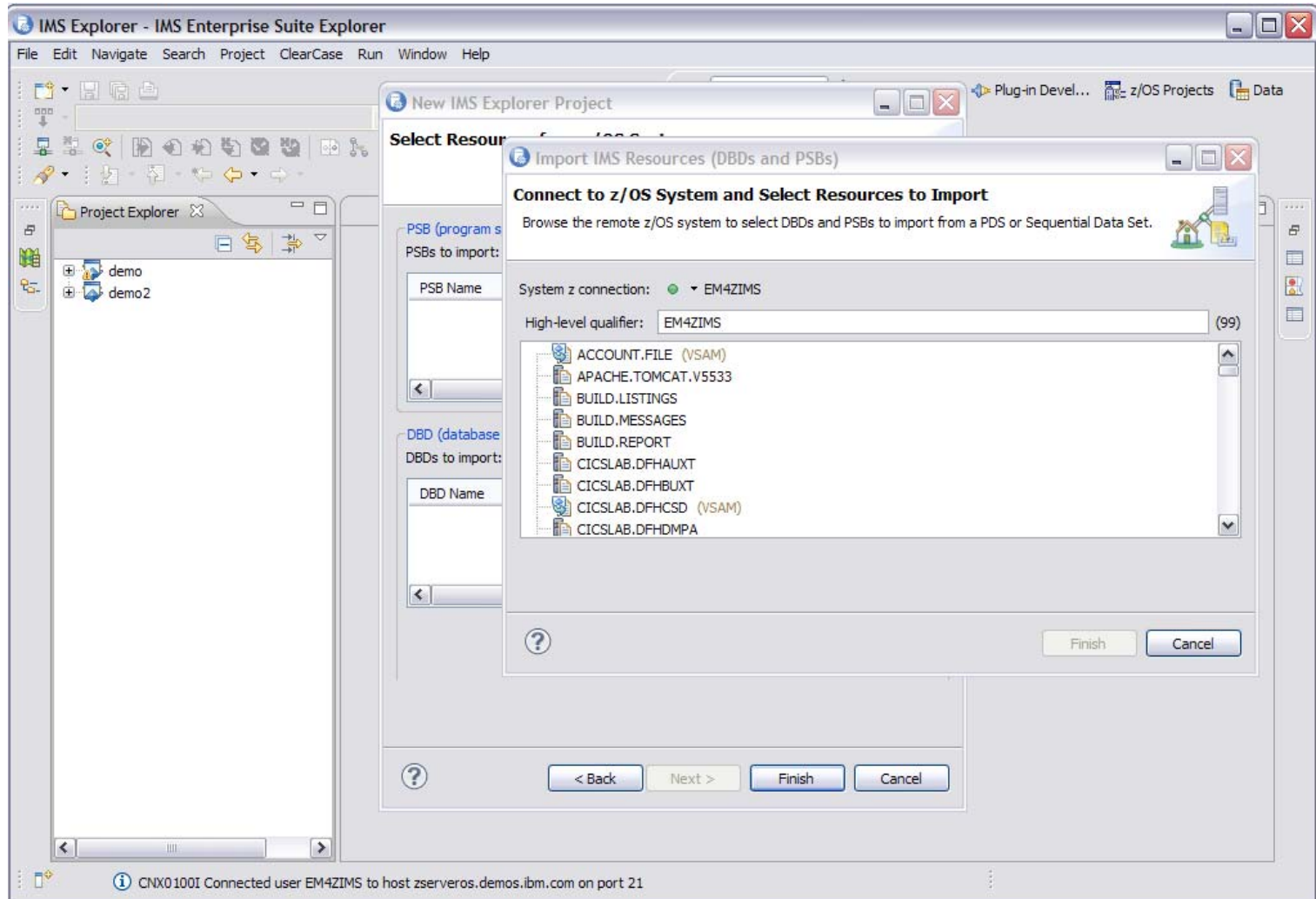
Import from z/OS



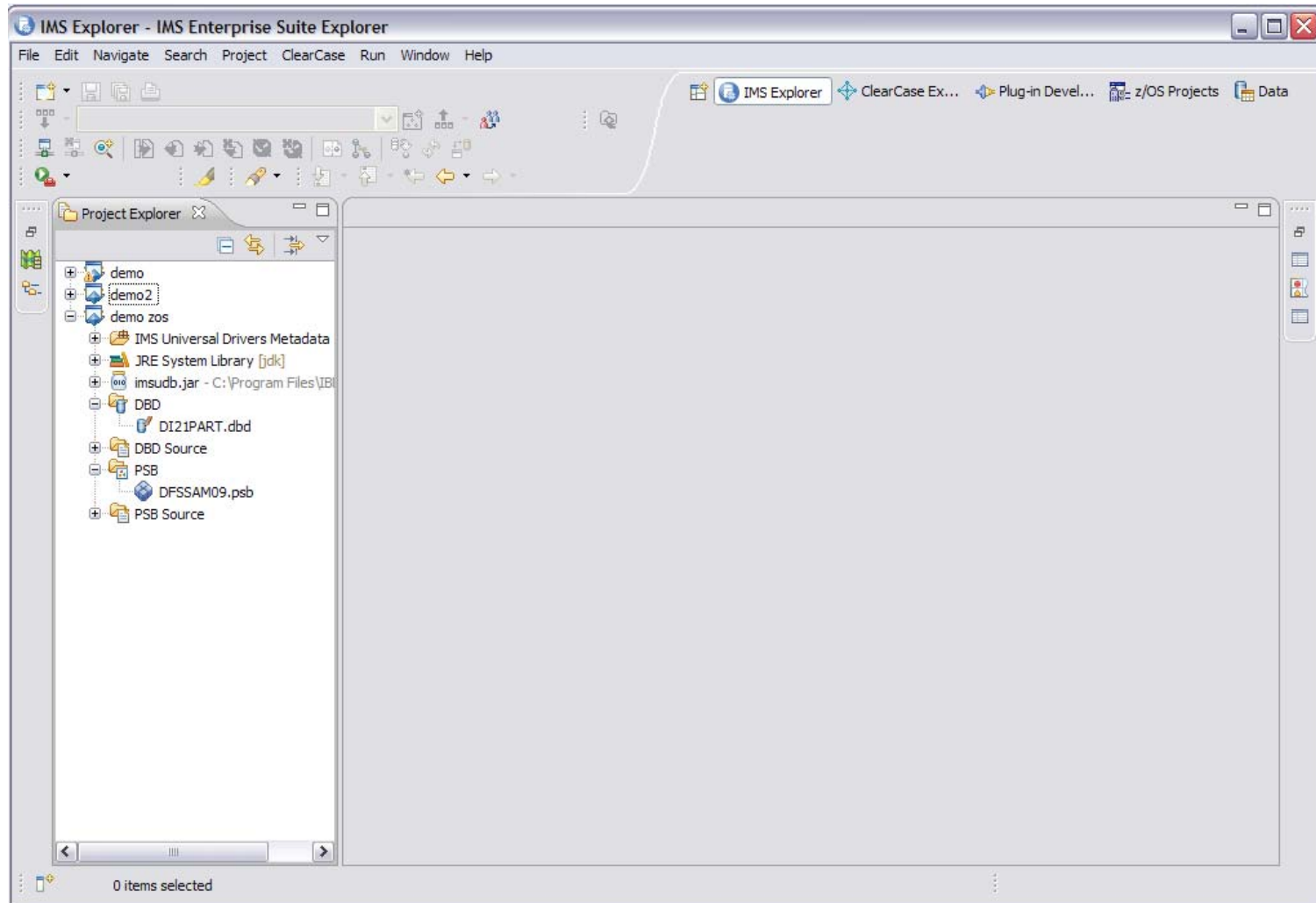
Import from z/OS



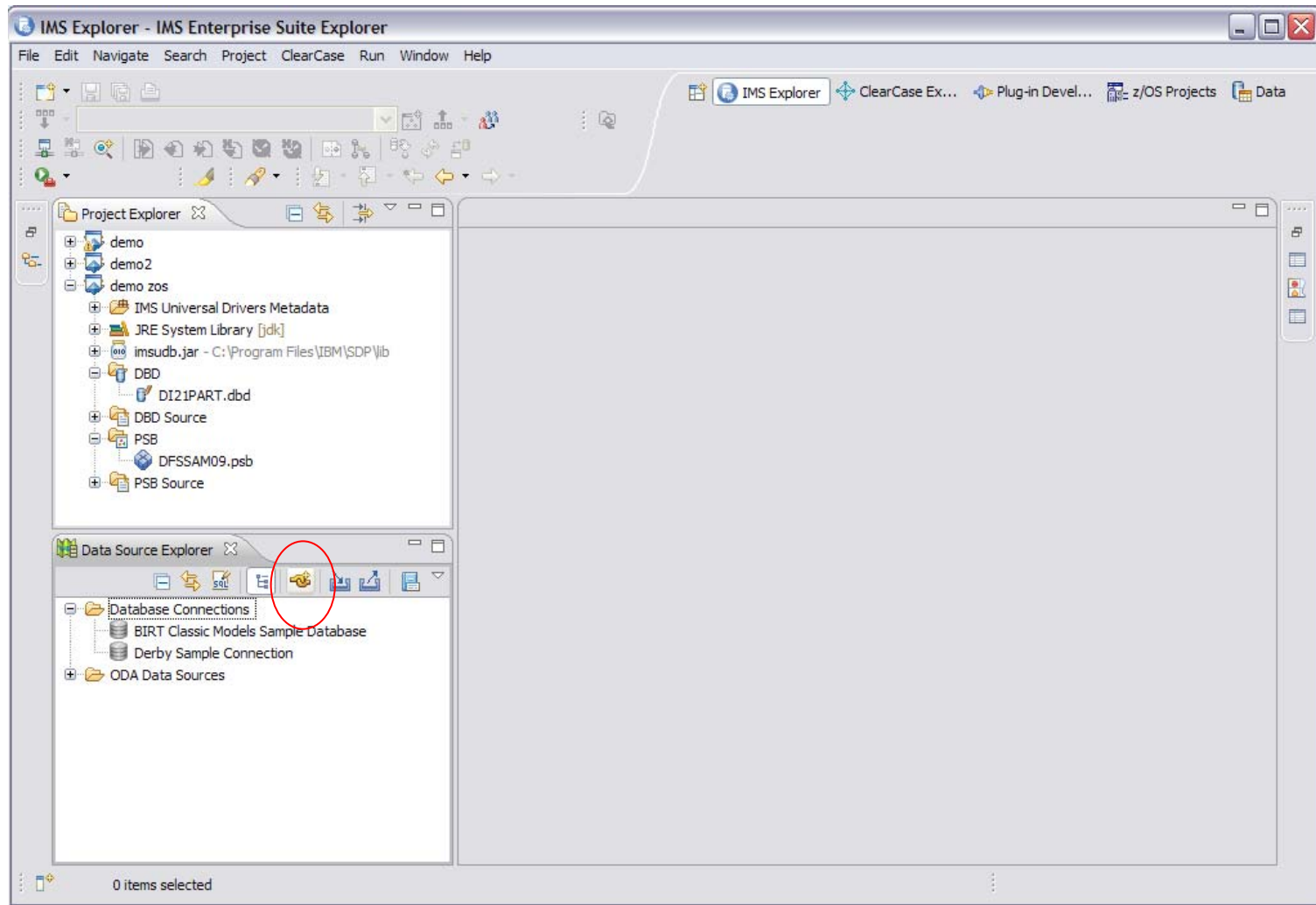
Import from z/OS



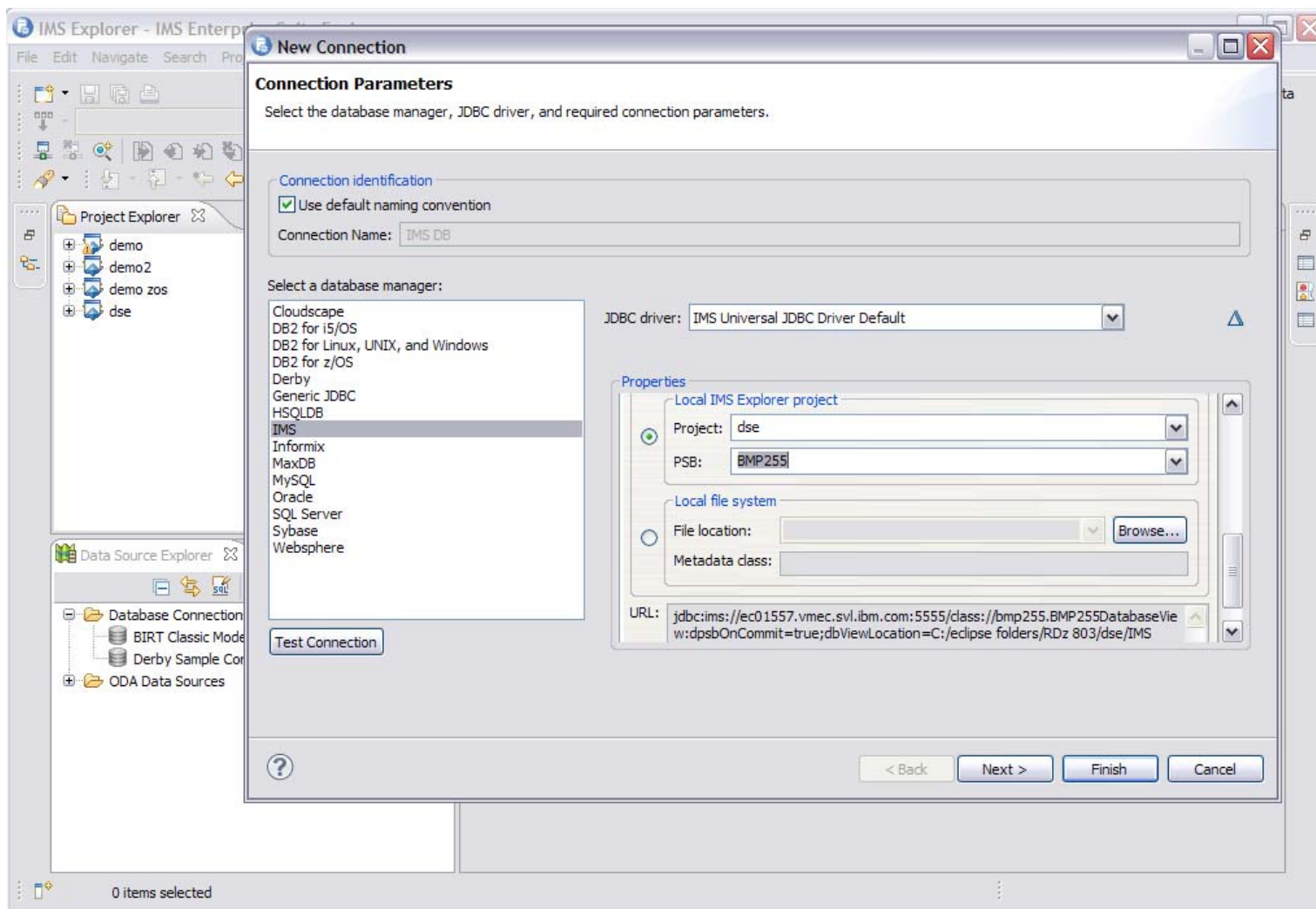
Import from z/OS



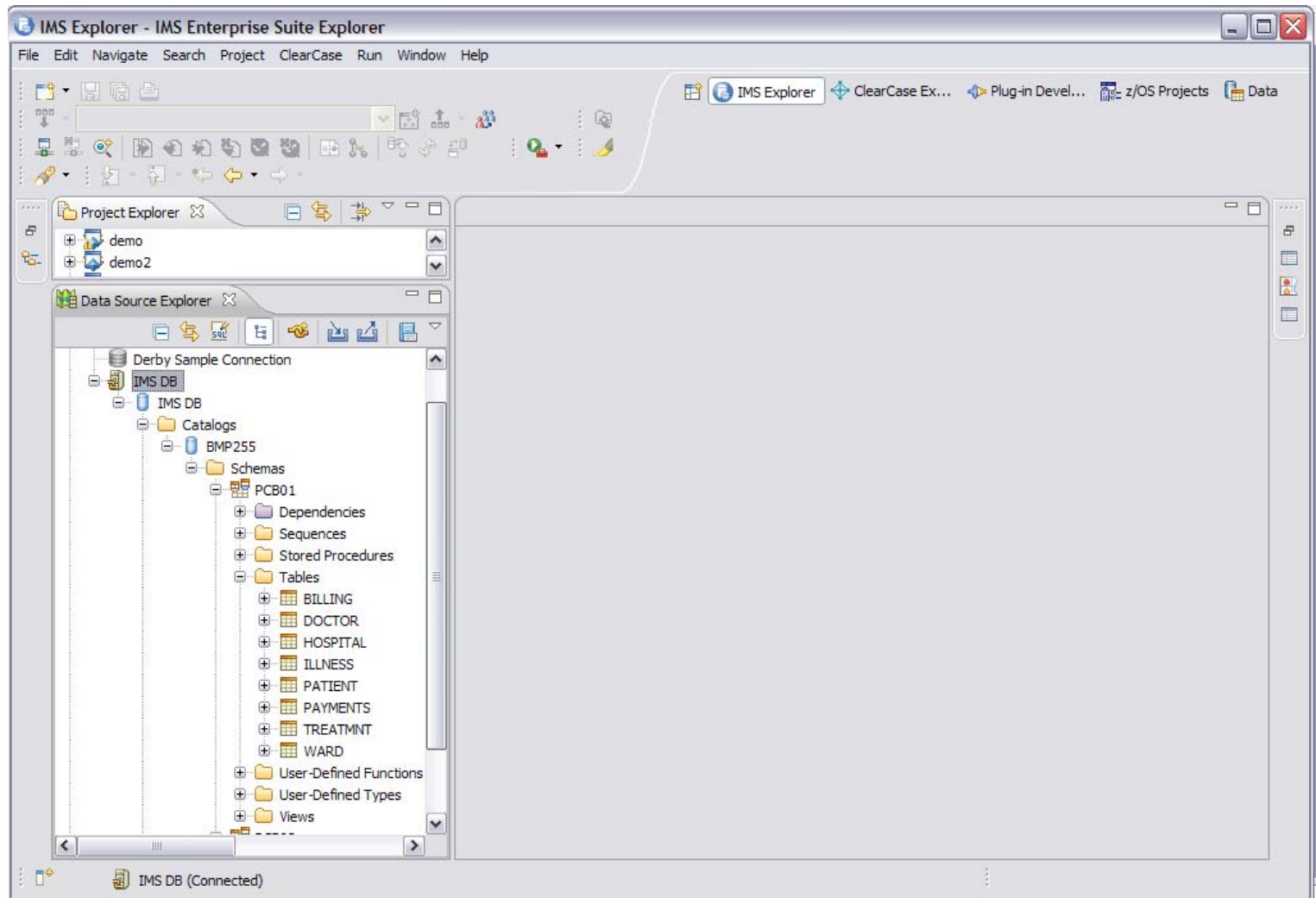
Data Source Explorer



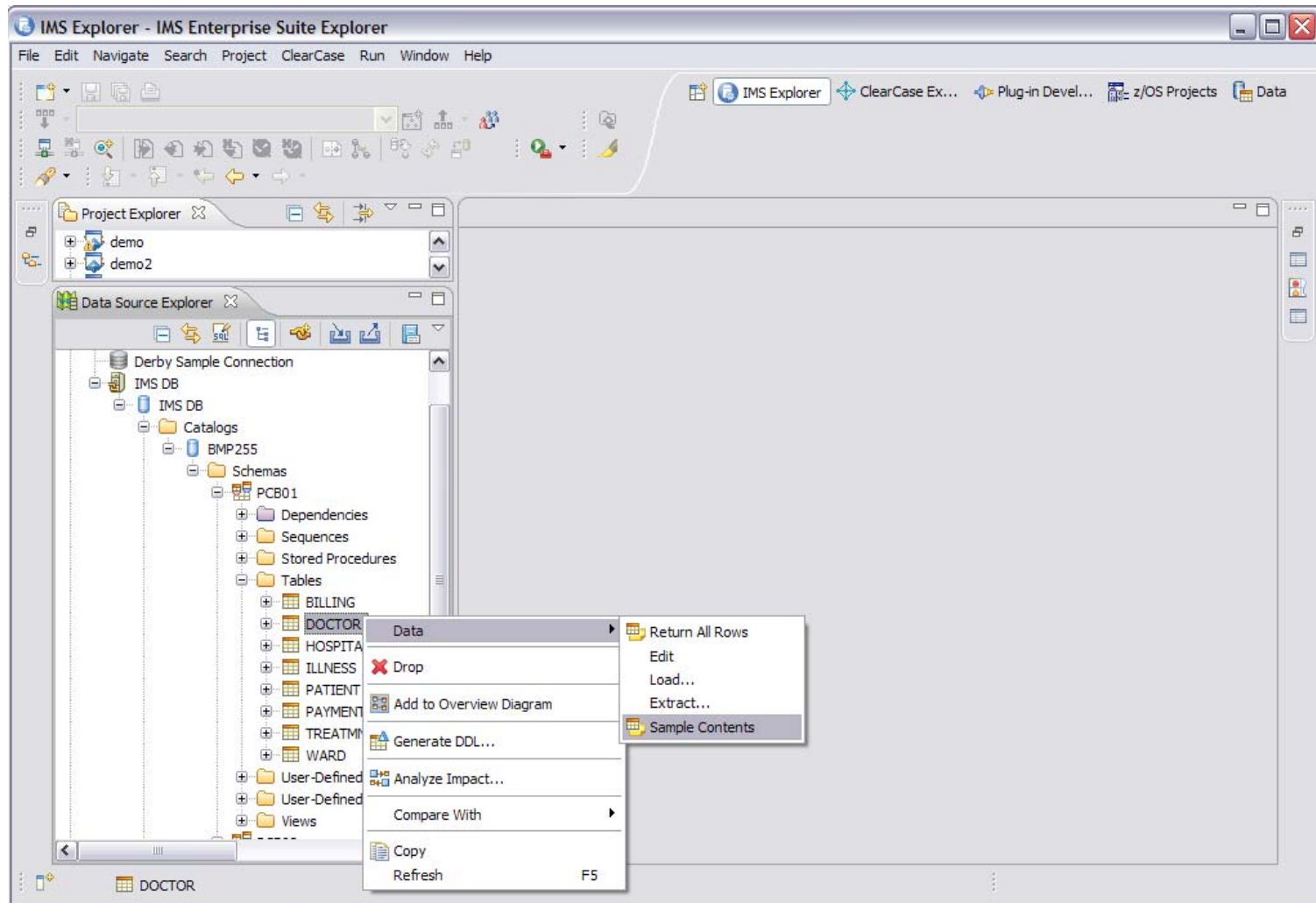
Create new IMS connection



Browse IMS database



Sample data



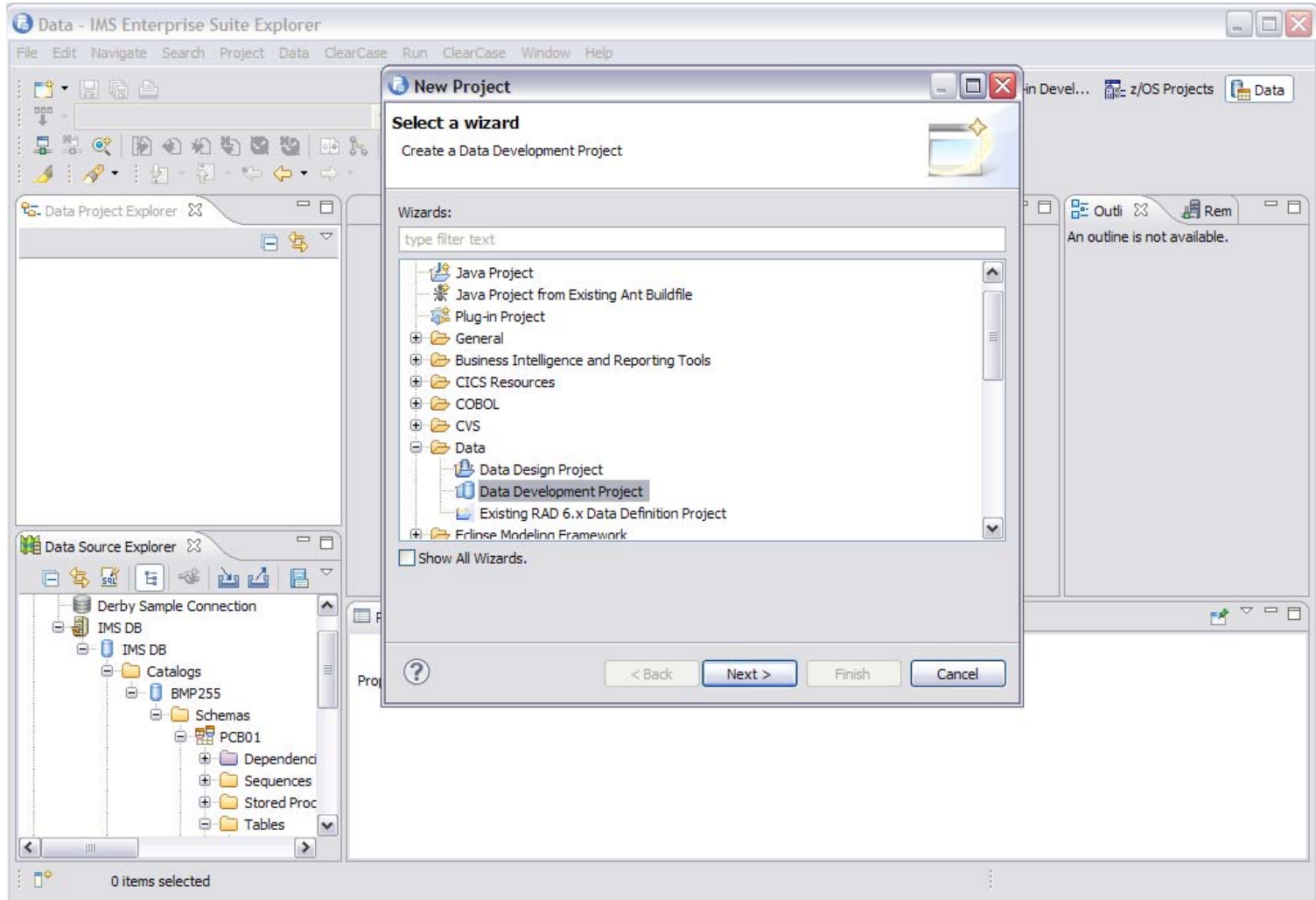
Sample data

The screenshot shows the IMS Explorer interface with the following components:

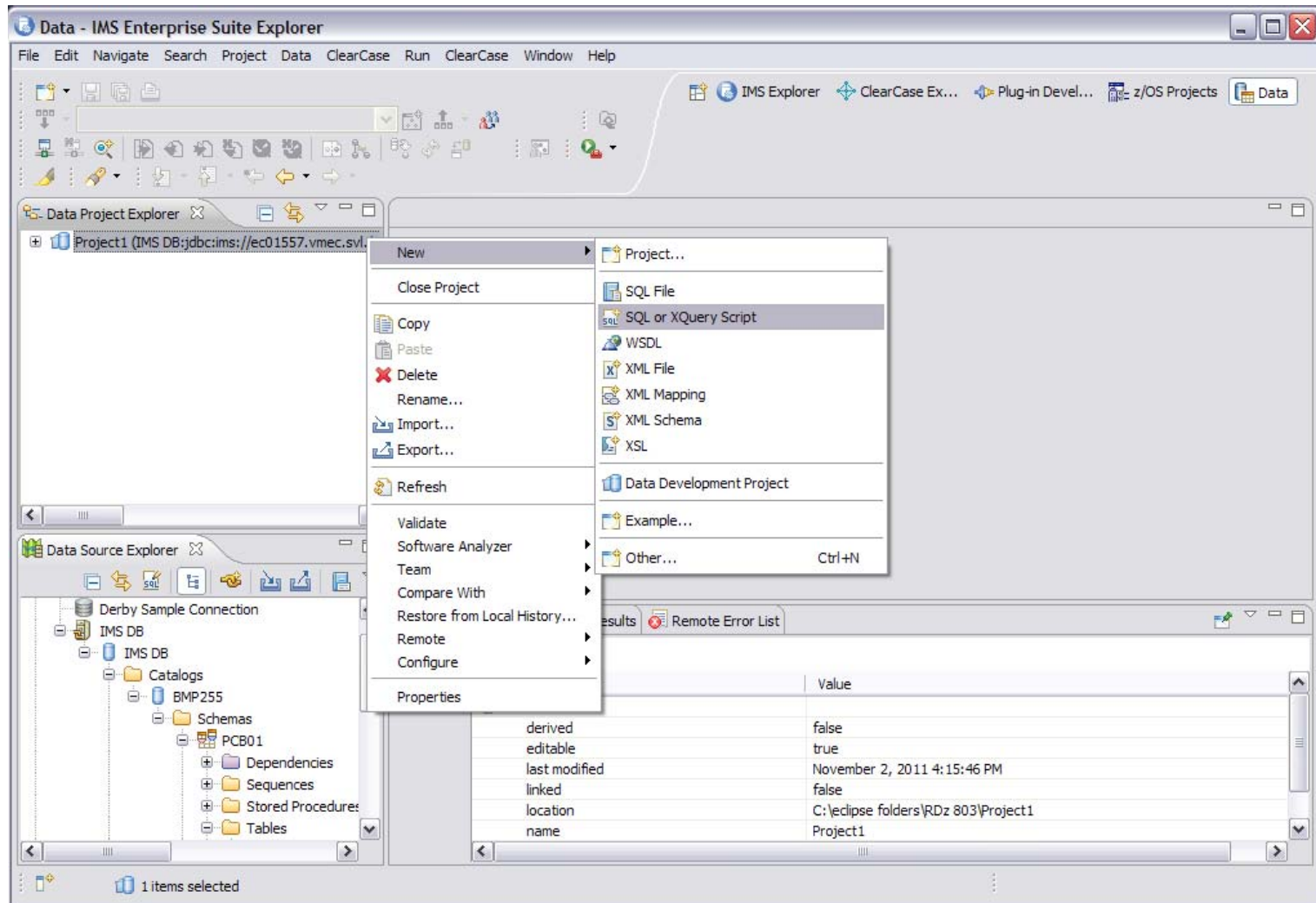
- Title Bar:** IMS Explorer - IMS Enterprise Suite Explorer
- Menu Bar:** File, Edit, Navigate, Search, Project, ClearCase, Run, Window, Help
- Toolbar:** Includes icons for file operations, navigation, and execution.
- SQL Results Panel:**
 - Status:** Succeeded
 - Oper...:** Nov 2, 2011...
 - Connectio.:** IMS DB
 - Table Headers:**

Status	Result1	HOSPITAL_HOSPCODE	WARD_WARDNO	PATIENT_PATNUM	DOCLL	DOCTNO	DOCNAME
1	R1210020000A	0002	0001	0x0...	0045	JOY SP...	
 - Footer:** Total 1 records shown
- Bottom Status Bar:** Displayed 1 of 2 results: 1 succeeded, 0 failed, 0 terminated, 0 warning, 0 critical error

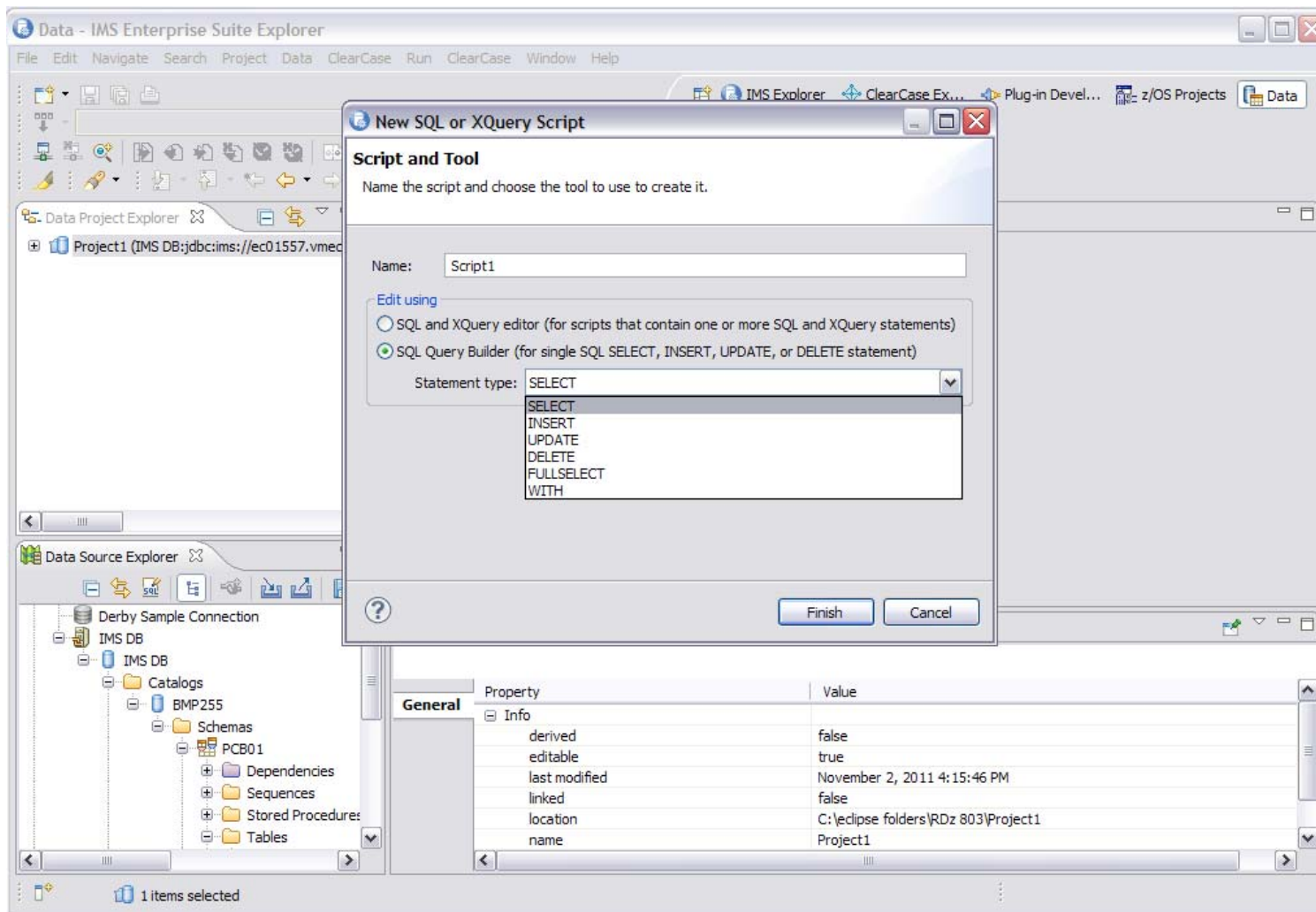
Create SQL script



Create SQL script



Create SQL script



Create SQL script

The screenshot shows the IMS Enterprise Suite Explorer interface. The main window is titled "Data - Project1/Script1.sql - IMS Enterprise Suite Explorer". The menu bar includes File, Edit, Navigate, Search, Project, Data, ClearCase, Run, SQL, ClearCase, Window, and Help. The toolbar contains various icons for file operations and database actions. The left pane shows a project tree with "Project1 (IMS DB;jdbc:ims://ec01557.vmec.svl.ibm.com)" containing "SQL Scripts" and "XML" folders, with "Script1.sql" selected. The bottom-left pane shows "Database Source Explorer" with "Database Connections" including "BIRT Classic Models Sample Database", "Derby Sample Connection", "IMS DB", and "ODA Data Sources".

The central editor displays the following SQL script:

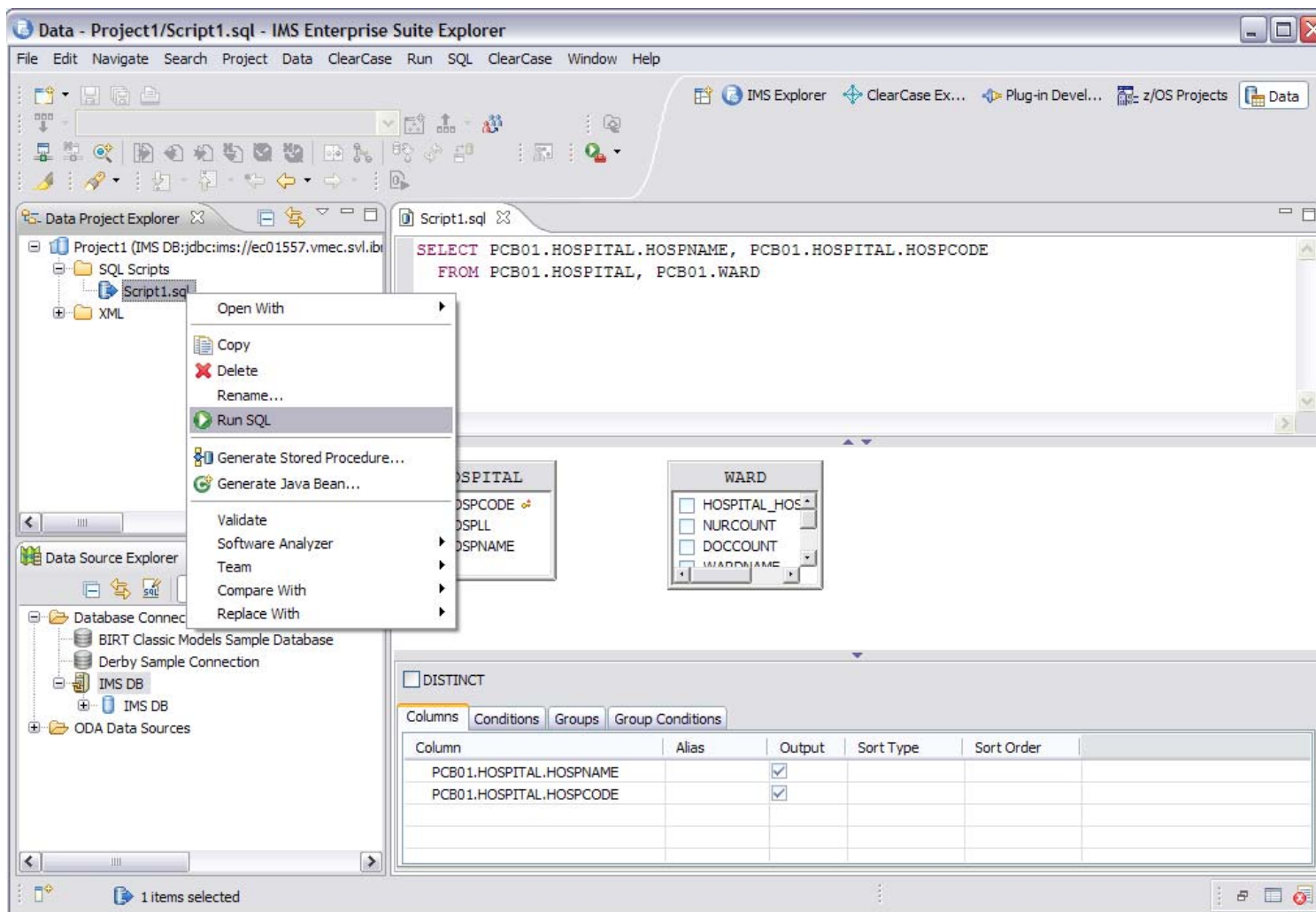
```
SELECT PCB01.HOSPITAL.HOSPNAME, PCB01.HOSPITAL.HOSPCODE
FROM PCB01.HOSPITAL, PCB01.WARD
```

Below the editor is a table builder interface. It features two panels: "HOSPITAL" and "WARD". The "HOSPITAL" panel has checkboxes for "HOSPCODE", "HOSPLL", and "HOSPNAME", with "HOSPCODE" and "HOSPNAME" checked. The "WARD" panel has checkboxes for "HOSPITAL_HOS...", "NURCOUNT", "DOCCOUNT", and "WARDNAME", with "WARDNAME" checked. Below these panels is a "DISTINCT" checkbox, which is currently unchecked. At the bottom, there are tabs for "Columns", "Conditions", "Groups", and "Group Conditions". The "Columns" tab is active, showing a table with the following columns: Column, Alias, Output, Sort Type, and Sort Order.

Column	Alias	Output	Sort Type	Sort Order
PCB01.HOSPITAL.HOSPNAME		<input checked="" type="checkbox"/>		
PCB01.HOSPITAL.HOSPCODE		<input checked="" type="checkbox"/>		

The status bar at the bottom indicates "Database type: IMS_V11,Curre..., Database: IMS DB,connected".

Create SQL script



Create SQL script

The screenshot shows the IMS Enterprise Suite Explorer interface. The main window displays the results of an SQL query. The results are organized into two tables: one for query execution status and one for the query output data.

Status	Oper...	Date	Connectio...
✓ Succeeded		Nov 2, 2011...	IMS DB
✓ Succeeded	SELECT HOS...	Nov 2, 2011...	IMS DB
✓ Succeeded	SELECT PCB...	Nov 2, 2011...	IMS DB
✗ Started	SELECT PCB...	Nov 2, 2011...	IMS DB
✓ Succeeded	SELECT PCB...	Nov 2, 2011...	IMS DB

Status	Result1	
	HOSPNAME	HOSPCODE
1	ALEXANDRIA	R.1210010000A
2	SANTA TERESA	R.1210020000A
3	SANTA CLARA	R.1210030000A
4	NEW ENGLAND	R.1210040000A

Total 4 records shown

Displayed 5 of 6 results: 4 succeeded, 0 failed, 0 terminated, 0 warning, 0 critical error

For more demos and tutorials...

The screenshot shows the 'Plug-in Development - IMS Enterprise Suite Explorer' web application. The interface is divided into two main columns. The left column, titled 'Web Resources', lists several product information sections: 'IMS Enterprise Suite', 'IMS', 'IMS Enterprise Suite Explorer', 'Rational Developer for System z', and 'Rational Developer for System z Information Roadmap'. Each section includes a small icon and a brief description. The right column, titled 'Tutorials', features a section for 'IMS Enterprise Suite Explorer for Development (IMS Explorer)' with a sub-section for 'Tutorials'. This section includes a video icon and a description of video screencasts demonstrating common tasks. Below this, there is a section titled 'Generating the artifacts to enable an IMS application as an ATOM feed' with a document icon and a detailed description of the tutorial's content and estimated time. A 'More >>' link is visible at the bottom of the tutorial section. The bottom of the page shows a 'Samples' section with a sub-section for 'IMS Enterprise Suite Explorer for Development (IMS Explorer)' and a 'Sample DBDs' link.

Plug-in Development - IMS Enterprise Suite Explorer

File Edit Navigate Search Project ClearCase Run ClearCase Window Help

Welcome

Web Resources

More >>

Product Information for IMS Enterprise Suite

IMS Enterprise Suite
Resources and support for IMS Enterprise Suite.

IMS
Resources and support for IBM Information Management System (IMS).

IMS Enterprise Suite Explorer
Resources and support for IMS Enterprise Suite Explorer (IMS Explorer).

Product information for Rational Developer for System z

Rational Developer for System z
Resources and support for Rational Developer for System z.

Rational Developer for System z Information Roadmap
This roadmap outlines the information resources that are available for installation, administration, and development of Rational Developer for System z.

Tutorials

IMS Enterprise Suite Explorer for Development (IMS Explorer)

Tutorials
View video screencasts that demonstrate common IMS Explorer tasks, such as creating an IMS Explorer project, visualizing IMS databases, and accessing IMS data using SQL.

Generating the artifacts to enable an IMS application as an ATOM feed
This tutorial walks you through the steps from identifying the application design and feed requirements, generating the required converters and correlator file from a COBOL copybook, to creating a feed in IBM InfoSphere MashupHub. Estimated time: 60 minutes

More >>

Samples

IMS Enterprise Suite Explorer for Development (IMS Explorer)

Sample DBDs

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