ABSTRACT™

The System i Application
Analysis Tool

ABSTRACT

Simplify System i Application Development

ABSTRACT™ is a set of integrated cross-referencing, documentation, and programming tools for Power Systems™ running IBM i (System i,® iSeries,® and AS/400® systems) that helps you develop, manage, and analyze your software applications. Everything you need to simplify your System i application development is in one easy-to-use package. ABSTRACT builds a cross-reference of system objects and procedures; tracks object and field usage and the relationship between objects; and performs file analysis and other reference tasks. It even provides graphical flowcharting to help you easily document and analyze your applications.

Develop Applications Quickly

ABSTRACT offers three user interfaces—graphical interfaces for WebSphere Development Studio Client for System i (WebSphere Development Studio) and IBM Systems Director Navigator for i (iSeries Navigator), and a standard "green screen" interface—to put development tasks and utilities at your fingertips. ABSTRACT displays an integrated cross-reference directory of objects so you can perform development tasks from a single screen. You simply select an object from the cross-reference display to edit it, recompile it, or whatever task you need to do, without having to navigate multiple utilities or screens.

Here are just a few of the ways ABSTRACT helps you simplify and speed up application development:
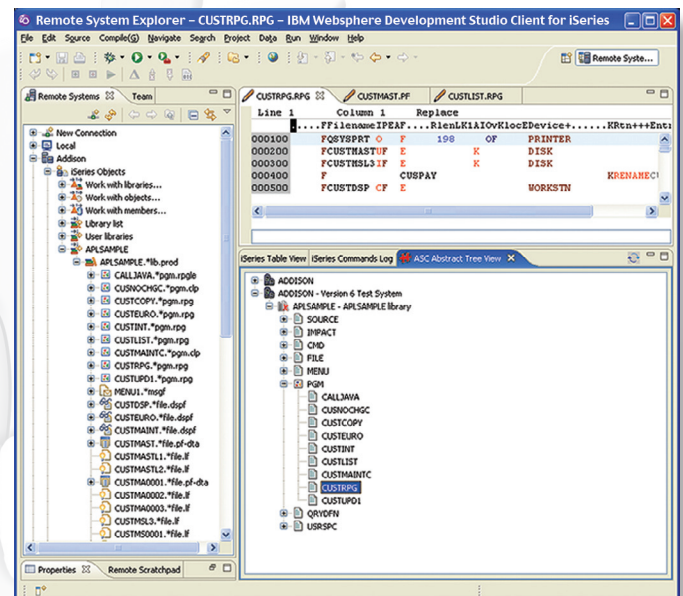
- Execute operations using menus, commands, or other programs (including System i change management products).
- Create, review, or edit options quickly without leaving your development environment.
- Use substitution parameters to reduce the number of transactions and tighten program integration.
- Define function key options, including generic options controlled by object type and attribute.
- Create custom option codes up to three characters long.
- Convert PDM options automatically.
- Define multiple commands in an option code.

Manage Complex Information Easily

ABSTRACT's powerful development features make it easy to maintain cross-reference information independently for multiple application sets.

File Analysis: Obtain information about external and internal file layouts, database relations, and member definitions. See the external definition of the record format with information about application usage and the definitions of program-described files. You see a count of active records, deleted records, and member text for each database file member. You can even view database structure and access path information to determine the relationships between the physical and logical database files in your application.
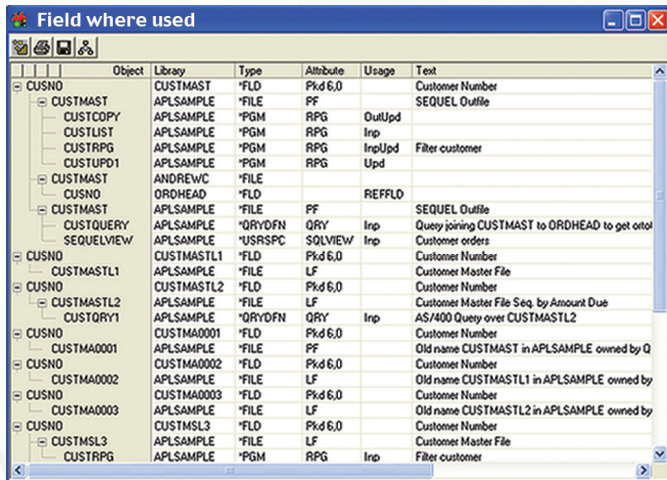
Object Relationships: Present information in a hierarchical layout that models the object-to-action relationship between elements in your software application. ABSTRACT's Object Usage display lets you see where a selected object is used; its Object Reference display shows which objects are used by a selected object.

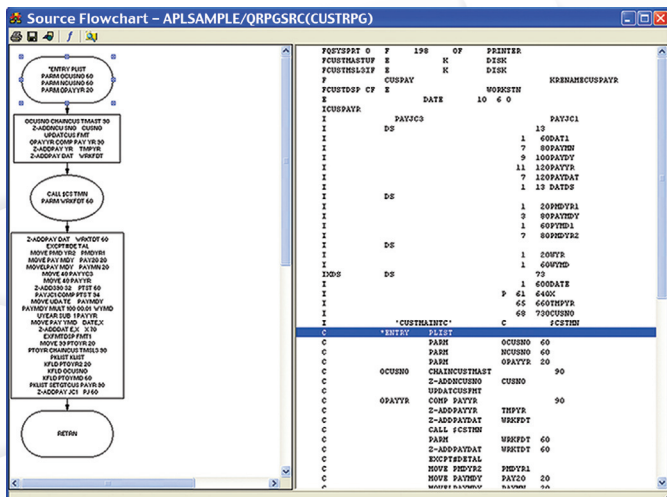*Use ABSTRACT and WebSphere Development Studio to view relationships and edit source code.*

Cross-Reference: Analyze applications, track object and field usage, determine the relationships between objects, perform file analysis, and incorporate other important reference information to build a "where-used" cross-reference of system objects.

Display a cross-reference of "where-used" results for fields.

Flowcharts: Generate graphical flowcharts, including Visio flowcharts, for WebSphere Development Studio and iSeries Navigator, detailing the relationship between objects. (The WebSphere version also analyzes the logic in RPG programs.) You can even edit the flowcharts to preview planned application changes.

Generate an ABSTRACT flowchart to show the relationships between objects.

Re-create Database Relations: Reduce the time and effort required to rebuild objects after you change physical file record layouts or programs. ABSTRACT performs the following 9 rebuilding tasks automatically:

1. Renames the current physical file.
2. Creates the new physical file using the current file attributes.
3. Creates all logical files built on the old physical file into QTEMP.
4. Adds members to the new physical file.
5. Adds members to the new logical files, preserving the original DTAMBRS structure.
6. Copies data from the old physical file to the new one.
7. Deletes logical files from the old physical file.
8. Deletes the old physical file.
9. Moves the new logical files from QTEMP to their original libraries.

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Exception Reports: ABSTRACT reports help you spot potential issues with applications or cross-referenced data. You can create reports identifying potential problems with an application, or with cross-reference data, for the following types of objects:

- **Orphans:** Objects in an application library that are not referenced by another object in the ABSTRACT database.
- **Undocumented:** Objects in an application library that were never loaded into the ABSTRACT database (or not since a certain date).
- **Source Conflict:** Objects in an application library containing information referencing a source member that cannot be located on your system (or that changed since the object was created).
- **Unused:** Objects that are never (or rarely) used.

Find String: Search source and message files for specified strings of data for quick editing and updates.

Edit Objects: Edit an object's source code using a variety of editing tools.

Analyze Fields and Automate Source Code Conversions

The ABSTRACT Conversion Utility is an add-on to ABSTRACT that offers two modules—**Impact Analysis** and **Conversion**—you can use for RPG development projects to mark fields for expansion (or impact analysis) and automate source code conversions.

Perform Detailed Analysis On Database Fields

With the Impact Analysis module, you can analyze your database to:

- Identify how specific fields are used in programs and passed as variables to external programs.
- Identify program-defined work fields that need expansion.
- Generate an impact analysis report detailing the impact of code changes, including summary statistics and project cost estimates.

Automatically Convert Existing Source Code

The Conversion module creates new files, rebuilds file relationships, recompiles programs, and converts data from existing databases to new formats. Use it to eliminate weeks or months of manual effort:

- Expand field references.
- Create new source members based on the existing source and conversion attributes you specify.
- Automate tasks such as expanding database fields or re-creating object relationships.

Automate E-Mail and FTP Report Distribution

Add ESEND™ (licensed separately) to ABSTRACT to automatically e-mail System i spooled files and PC files on the IFS. Use its intuitive, easy-to-use menu options to tailor your e-mail to your requirements.

- **E-mail Attachments:** Add up to 300 attachments per message.
- **Spooled Files:** Send spooled files to other System i servers or partitions, or convert these files to HTML, RTF, TXT, or PDF files for distribution anywhere.

- **Distribution Lists:** Define e-mail and FTP address lists for broadcast deliveries.
- **Database Files:** Send System i file data to remote systems in binary mode.
- **Advanced Function Printing (AFP) and Form Overlays:** Convert AFP files to PDF format and manage Form Overlays.

Join The Satisfied Customers Using Our Data Access and Programmer Productivity Solutions

As part of the Help/Systems family of companies, SEQUEL Software data access and productivity solutions for the System i really deliver. Since 1982, Help/Systems has focused successfully on one goal: to deliver the highest quality software, training, and support possible to help you make your System i the best system for your business needs. It's no accident that Help/Systems companies create the world's best software for the System i. When you combine committed development, marketing, sales, support, and administrative people with strong management, processes that really work, a powerful drive to succeed, and a complete dedication to quality, the results speak for themselves.