

IB-ARM Detailed Product Description



IB-ARM was designed with an open architecture to fully support ARM implementations in heterogeneous, complex and unique environments.

The architecture and features of IB-ARM are described below.

Overview

Most of today's business applications are mission critical applications that need to operate reliably and continuously for long periods. During this long lifetime, they will need to be maintained and enhanced as business conditions change and processes evolve or are replaced.

These strategic systems tend to be large and complex and are often a combination of mainframe, two- or three-tier client/server and web applications. It is an unfortunate but unavoidable fact that most software applications are destined to be maintained and enhanced by teams that were never involved in the original design. Thus, the team's understanding of these systems must be based on their analysis of the available documentation and study of the system objects (e.g. code). Conflicting information is common, as, very often, the internal documentation does not reflect what is currently in production.

The development and maintenance teams recognize the need for a tool that is able to capture and describe the current "state" of the application objects and their relationships. Such a tool will be used extensively by developers, systems analysts and business analysts in the maintenance and future enhancements to the applications.

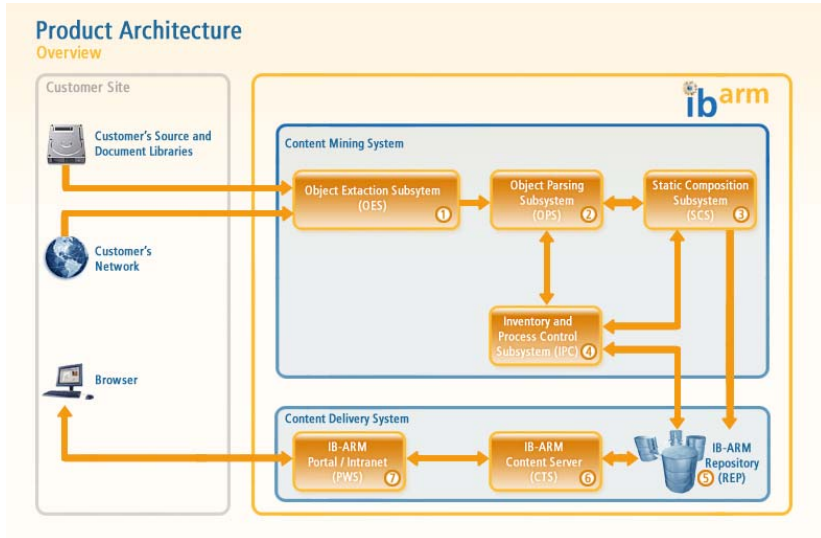
IB-ARM provides a coherent, complete and authoritative representation of all the application system objects and their inter-relationships. Objects such as business processes, steps, database tables, attributes, procedures, programs, scripts, windows, events, can be shown together with their dependencies.

The focus of IB-ARM is the presentation of intelligence related to business objects, including the dependencies between the various objects. IB-ARM integrates this large volume of 'detail level' information to give higher-level views showing the object interactions in the context of each application and how they relate to the broader system. These views can significantly aid the understanding of all team members and reduce the 'learning curve' dramatically.

The information is captured and organized in a centralized repository and presented in a user-friendly format, so that questions such as "what system objects call a specified rule" and "what system objects may be called if a validation routine is called" can be answered quickly and accurately.

IB-ARM Architecture

The IB-ARM architecture contains several steps that are performed to prepare a client's content. These steps are performed initially to populate the repository and then repeated, on an ongoing basis in order to keep the information current and accurate. IB-ARM has seven independent application components that communicate with each other via well-defined interfaces. These applications are depicted in this diagram.



The seven independent applications that make up IB-ARM are described below:

- 1) OES - Object Extraction Subsystem – The system responsible for gathering raw content (documents / source code / infrastructure data) from the client site(s) and forwarding it to the IB-ARM network.

Content Mining System:

- 2) OPS - Object Parsing Subsystem – A collection of tools to parse documents/source code and load parse results into a relational database (or generate repository -loadable XML directly).
- 3) SCS - Static Composition System – An application to generate the static content in XML format to be loaded into the repository.
- 4) IPC - Inventory and Process Control Subsystem – The system that automates the repository continuous refresh process and report generation.

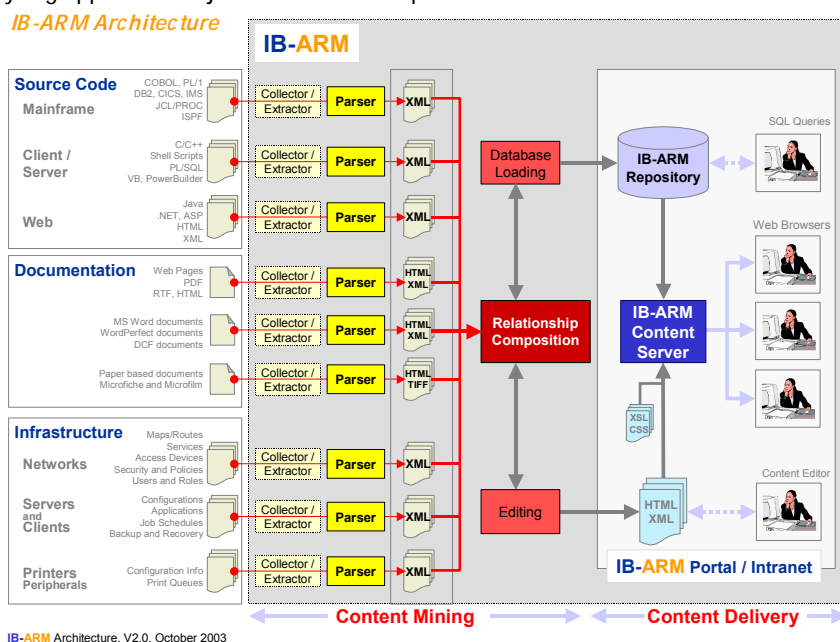
Content Delivery System:

- 5) REP – Content Repository – This application consists of a database, file system and associated loader where all the IB-ARM content resides. The loader expects content data in XML format.
- 6) CTS - Content Server – The application responsible for the data retrieval from the repository (REP) and for the creation of dynamic XML. It forwards the XML content to PWS.
- 7) PWS - Web Portal / Intranet – The web server application that manages the XML to HTML content transformation, session maintenance and security aspects of IB-ARM.

Content Mining System

Content Mining is at the heart of the IB-ARM delivery facilities. The Content Mining system involves the collection, parsing, indexing and filtering of objects and relationships to be included in the Content Repository. This includes the initial analysis and loading, plus the ongoing continuous refresh of the Content Repository data.

The Content Mining System always resides at Information Balance, as it contains both third party tools and proprietary tools for parsing and analyzing application objects and relationships.



Content Delivery System

The Content Delivery system provides a window into the Content Repository. IB-ARM delivers application relationship content to the end user via a user-friendly web interface. Using this facility, team members can view repository information in a variety of ways and drill-down from higher-level views to more detailed views appropriate to the focus of their analysis.

The key Content Delivery features of IB-ARM are:

- Content Delivery Views – the views provide a window into the repository contents. Pre-defined views can include application relationships and software quality metrics.
- Search Engine – a built-in feature of portals, Search is used to find repository contents.
- Publish – Subscribe - the built-in portal Publish-Subscribe features are used to disseminate information to authorized users in all areas of the organization.

Several options are available for the deployment of the Content Delivery System:

- Implemented as a .Net website and hosted by Information Balance (as depicted in the Delivery Architecture diagram above).
- Implemented as a .Net website and hosted by the customer.
- Implemented in SharePoint portal and hosted by Information Balance.
- Implemented in SharePoint portal and hosted by the customer.
- Additional portal products will be supported in future releases of IB-ARM.

Content Delivery Views

The information in the IB-ARM content repository can be displayed in many ways. Content Delivery Views have been designed to help visualize and analyze systems effectively, in order to achieve a high level understanding of how the application implements its business functions in a given computing environment.

The following are examples of the different tabular and graphical representations that IB-ARM can produce in order to expose the most significant characteristics and relationships across applications and across platforms, within a systems portfolio.

Base Views

These views present the business objects and their relationships.

Impact Analysis Views

Most organizations rely on employees' memories or manual records. IB-ARM provides the tools to make informed decisions about system fixes and enhancements based on fully accurate and current information. This group of views identifies the various physical components of the system that will need to be changed as a result of a specific requirement, such as mass change (e.g. change the size or definition of a field) or various platform migration scenarios.

Code Analysis

This group of views and reports identifies the various physical and logical components of the system and helps understand the internal organization of these components. Code Analysis activities include analyzing source inventories, transaction reports, relationship diagrams and many cross-references among the various components.

Data Analysis

The deliverables for data analysis identify the various data elements such as records, files and databases. They provide cross-references between the data components and executable components that operate on them.

Software Quality Analysis

This set of deliverables has been designed to expose the quality of the code from a maintainability perspective. Software Quality Analysis activities include the analysis of: lists of unreachable or unused components, reports of data type or data size inconsistencies and mismatches and areas with a high degree of code complexity.

Metrics

Organizations often use metrics programs to provide an objective checkpoint on the quality of software products being produced and an assessment of the quality of the software development process. The Content Delivery component of IB-ARM automatically captures these metrics. The results obtained can then be compared to the desired results for these checkpoints and further action taken when the desired results are not being achieved.

Performance Measurements

As a specific content delivery track to IB-ARM, the technology, application and data architectures of all systems can be analyzed from a performance point of view. Elapsed times to complete batch cycles, and the performance of individual on-

line transactions can be investigated and the results compiled via the IB-ARM framework. From these performance measurements, actual or potential problem areas can be identified, probable causes identified and action plans initiated to eliminate them.

Continuous Refresh

For some client situations, Content Mining may be a one-time effort. For most however, there is a need to continue the indexing and merging on a continuous basis. The IB-ARM Continuous Refresh is a service provided by Information Balance. IB will refresh the production content environment to reflect changes / additions to the environment since either the initial set up and configuration, or since the most recent refresh.

When continuous refresh is used, a set of service levels must first be established and mutually agreed on. This 'service level agreement' (SLA) will include detailed schedules for the refresh. Then the mechanisms for the refresh must be developed and tested to confirm that the refresh can occur according to the schedule identified in the SLA.

About Information Balance, Inc.

Information Balance Information Balance, Inc. was founded in 1988 to provide consulting and training services to the IT industry. Over the years and through continuous growth, the company's field of expertise has significantly broadened and now includes all aspects of Systems Development and Integration, covering all platforms including mainframe, client/server and the Internet. Many of these areas are supported by formal training curricula.

Today, Information Balance, Inc. is a well-established firm with offices in Canada and Europe. Sustainable, controlled growth has been the mainstay of Information Balance's success, with over 30% growth year over year. Information Balance has been awarded the following accolades supporting its corporate excellence.

- Financial Post Fast 50 ('98,'99,'00)
- Profit Top 100 ('99,'00)
- Andersen 50 Best Privately Managed ('99, Regional Finalist)

Information Balance maintains on-going professional relationships with many large Fortune 500 corporations and government organizations.

For more information, please call 416-962-5235, e-mail infobal@infobal.com, or visit our website at www.infobal.com.