

BIN Technical Overview

Objective

The objective of this document is to explain the technology behind the **Broward Information Network**.

Brief history of BIN

Broward Information Network was developed to facilitate information sharing among various service-oriented organizations in Broward County. Each organization had a legacy application system for case management. It was difficult to communicate between these disparate systems. Hence there was a need to develop a common Infrastructure to overcome this problem.

Hardware / Software:

Hardware:	Dell
O/S	Windows NT 4.0 / 2000
RDBMS	Oracle 8.1.7
JSP/Servlet container	Tomcat 4.1.8
Language	Java, PL/SQL, C, perl, VB script
HTTP server	IIS 4.0
Tools	Crystal reports 8.5, Data Junction, SSA Name3

Network Infrastructure:

BIN runs on a private frame relay network managed by Bell south. Each participating providers has installed a NT/2000 server running oracle dedicated for BIN, a router and a connection to the frame relay network.

Each provider pushes a part of their transactional data, which they agreed to share, to their BIN server in a secured way. The access to the BIN servers are restricted and protected by firewalls.

The providers keep their data in their own BIN server. Hence they have total control over their data, and they decide what to share.

The BIN web server is connected to the BIN frame relay network and accessed by the providers who are connected to the frame relay network. The providers who are not connected to the frame relay network access BIN application using CITRIX / VPN connectivity.

**[Please refer to the BIN network diagram – appendix A]*

Extraction, Transformation and Loading (ETL):

- Each BIN provider has installed a dedicated Windows NT server running Oracle 8i.
- A database was created for each provider and is running on their dedicated BIN server.
- Scripts were developed to extract data from provider's legacy system. Data is transferred to the BIN server.
- Scripts were developed to load the data from the legacy system to BIN Oracle database.
- The BIN servers are connected in a private frame relay network managed by Bell south.
- A Windows NT server running oracle 8i was installed as BIN Admin server.
- A central database was created in the Admin server to keep a master index of all the clients in BIN

**[Please see the BIN data flow diagram – Appendix B]*

Client matching

The client information is collected from provider's legacy systems. Each system use different client ids to identify their clients. Hence there was a requirement to uniquely identify each client in BIN with a common Id.

Client matching is performed in BIN using the client name, DOB, SSN, gender, ethnicity. Combinations of these criteria are used to match the client.

The central Admin database has a master table of clients uniquely identified by BIN ID, when a client is loaded in to BIN, that client's criteria is matched with this master table, if a match found then the BIN ID is assigned to the client, if a match not found then a new BIN ID is assigned to the client and both the master table and provider's client table are updated.

BIN application:

BIN application is developed in J2ee platform. It is web based and supports both Internet Explorer and Netscape Navigator.

Users authentication / authorization, is performed in the admin database. First the users will be connected to the BIN admin database, when they select a particular client and request for more information on that client, they will be connected to the remote BIN database. The database connection is achieved by oracle database link.

The following are the features currently available in BIN

- **Client Lookup**
- **Interagency Notes**
- **Online referral**
- **Offsite registration**
- **Electronic Data Interchange**

Client Lookup

Users can search for a particular client using client name, DOB, SSN. Based upon the search criteria a list of matching clients along with the percentage of match and the name of the BIN provider they are from is displayed.

The client search is performed on the client master table in the admin server. **Name3** software from **Search Software America** is used for name matching and scoring. The name3 software creates keys for the client names based on some algorithm. And when a search is performed, the client keys are searched and a scoring is assigned based on the match.

Once the user select a particular client from the list, then the provider's database is queried to get more information on that client, such as client family information, education information, employment information, service information.

Interagency Notes

This feature allows the case managers to add a note to a client. The case managers can select a client from BIN and add a note (up to 600 characters long).

Online referral

This is an important feature of BIN. Case managers across the agencies can refer a client to another agency for a particular service. The referrals are instantly delivered to the target agency. The case managers can check the status of the referral online.

Electronic Data Interchange

When an agency receives referral for a client, they can download the client information from BIN and upload it to their case management application without re-keying the data. Data can be downloaded either in ASCII text or XML.

XML document on a client can be pulled from BIN and parsed into provider's application seamlessly without user's interaction.

Offsite Registration

This is like a portal. The hyper links to various institutions offering adult, community educational courses are listed and updated regularly.

Case managers can search for a suitable course for their client and register them online using this portal.