3270Builder™

Product Description

The 3270Builder Pack is an integrated product package that offers a set of tools and building blocks for re-engineering IBM mainframe applications, creating GUI front ends for legacy applications and integrating mainframe data into mission critical custom applications developed in the NEXTSTEP/OpenStep operating environments.

The 3270Builder Pack includes:

- 3270Builder Developer's Workbench
- 3270Adaptor 5-User Site License
- 3270Vision Single-User License
- Mainframe Emulator Release 2.0
- 3270Builder Developer's Training Class (2-day)
- Mentor-Level Technical Support (10 Hours)

3270Builder

The 3270Builder is a NEXTSTEP application which allows users to create a model of a legacy mainframe application quickly and easily with a simple point-and-click operation. The resultant model conforms to NEXTSTEP's Database Kit (DBKit) programmer's interface specification allowing direct access of mainframe information using standard Interface Builder palette objects for DBKit.

To create a new model, the user navigates through the mainframe application using a familiar 3270 terminal emulation window in the same way they would normally operate the mainframe from a 3270 terminal device. Transparently, 3270Builder analyzes and records all screen signature information, as well as the inter-screen traversal keystrokes, and stores this information in a DBKit compatible *.dbmodel* file. Conforming to the E/R database model, the 3270 screens in the mainframe application correspond to entities in the *.dbmodel* and fields on those screens correspond to the model's attributes.

Entities can be added manually or automatically, depending on the preference of the developer. Existing *.dbmodels* can be updated by simply reloading them into 3270Builder and adding, editing or deleting the entities and attributes which make up the model. Since applications developed using the 3270Builder technology bind dynamically to the *.dbmodel* at runtime, a change to a *.dbmodel* can be achieved without any need to modify or recompile the application(s) which depend on it.

In order to handle 3270 screens which manipulate data fields in non-static screen positions (i.e. tables of data that scroll by over multiple screens) 3270Builder supports virtual entity mapping. These virtual entities allow the developer to manage repetitive

information that may span across multiple screens, define custom traversal actions, conditional testing, multi-column table support, multi-line record formatting, etc.
At any point during the modeling process, 3270Builder allows a user to dynamically traverse the *.dbmodel* that is built to that point. Automatically, as easily as selecting the name of an entity in the model browser panel, 3270Builder sends the appropriate message to the 3270Adaptor and the mainframe is advanced to the screen requested.

3270Adaptor

3270Adaptor is a DBKit adaptor that provides the link between the database model built by 3270Builder and the corresponding mainframe application session. Totally transparent to the user, 3270Adaptor manages concurrent communications links to up to 64 IBM mainframes.

Utilizing advanced data caching algorithms, 3270Adaptor intelligently buffers data to minimize network load and maximize data throughput. Fully compliant with all mainframe-based security programs, 3270Adaptor automatically prompts users of the runtime application with a host login panel and also provides an option that allows developers to select between either a default host login panel or create their own using standard NEXTSTEP development tools.

3270Adaptor supports a broad range of mainframe communications protocols. The TN3270 protocol is supported providing compatibility with a wide variety of mainframe-based communications programs as well as numerous network-connected TCP/IP gateway products from companies such as OpenConnect Systems, Apertus Technologies, Brixton Systems, SunSoft, etc. Support is also provided for Novell's NetWare for SAA gateway as well as traditional SNA connections via industry standard Coax adaptor cards.

Mainframe Emulator

Mainframe Emulator allows users to do software development of modules which incorporate mainframe resources without a realtime connection to a mainframe. The Mainframe Emulator uses the *.dbmodel* produced by 3270Builder to simulate an actual connection to the mainframe. This allows both in-house developers and outside consultants to build a *.dbmodel* during a single session on the mainframe and then plan, write and debug the majority of their application from a remote site.

Designed as a UNIX network daemon, Mainframe Emulator promotes the collaborative development process and allows multiple NEXTSTEP developers on the network to work concurrently on the same or multiple 3270 application models. Mainframe Emulator eliminates mainframe load and risk of data corruption during the development process and creates an efficient development environment for developers which removes the typical constraints of having a local mainframe communications link.

The 3270Builder Advantage

The main advantages of using the 3270Builder approach to re-engineering IBM legacy systems are:

1. **Reduced Development Cycle.** 3270Builder's ability to automatically create a model of a legacy system by transparently monitoring a user's actions eliminates the significant programming burden associated with conventional screen scraping technologies such as HLLAPI and EHLLAPI. The result is an immediate ability to eliminate all programming requirements for screen mapping required by all other front-ending tools.

2. **Data Source Independence.** 3270Builder's use of the DBKit standard interface allows client applications initially developed to access data from the mainframe to be re-directed to access data from a new data server technology using any one of the numerous DBKit adaptors for data serves such as ORACLE, Sybase, etc. In addition, applications which require data from both mainframe and non-mainframe sources can seamlessly access multiple heterogeneous data sources concurrently.

3. **Non-Disruptive Implementation Architecture.** By delivering new, more efficient client interfaces to existing data in a fraction of the time possible using conventional tools 3270Builder allows IS managers to get end-users involved in the development process very early and benefit from getting real-time, hands-on feedback from users concerning application design. The result is applications which are better aligned to service a user communities specific requirements and a company's true re-engineering goals.

   The ability of the DBKit technology to maintain concurrent links to multiple data sources also allows 3270Builder technology to minimize the impact of replacing existing mainframe-based applications with client-server versions. For instance, because the front-end of the application is the same regardless of the data source, a concurrent link can be established between the mainframe and new client-server data source. The result is an ability to run the test and production systems in parallel from the same user interface which allows the developer to terminate the mainframe link which no disruption of service once the new data server has been fully tested.

The bottom line is: if you have legacy systems that you need to access and manage in your business process re-engineering project 3270Builder can significantly reduce your development time and greatly improve user productivity.