

## **Introduction**

RPGTRAN's RPG to C++ translator is called RPGTRAN..

RPGTRAN is a software product that reads RPG source code and ultimately writes a C++ program that duplicates the functionality of the original RPG source code that it read.

RPGTRAN eliminates a major portion of the labor intensive work involved in moving a existing RPG program to a new environment such as DOS, Unix, Ultrix, VMS, OSF/1, Etc.

## **Database Access**

A translated program calls a high level set of file access objects that are included with the translator as a C++ class library. When an interface to a new host database manager or ISAM package is needed only this class library must be changed and the translated program is then able to access the new host database.

## **Screen Management**

A translated program manages screens by calling a supplied C++ class library which duplicates the functionality normally provided by the AS400/S36/S38 operating systems. RPGTRAN reads RPG screen definitions and writes C++ code which initializes a instance of a C++ object which actually handles the screen I/O upon a call to it's methods from the main program.

## **Output Line Generation**

RPGTRAN translates the output section of the RPG program by writing code that initializes instances of a C++ output record object which is included in our C++ class library. These output record objects actually carry out the output when their methods are called from the main program.

## **Database Servers**

RPGTRAN ultimately interfaces to it's host database system through a series of C function calls so a host DBMS must provide some sort of C++ interface library or possesses the ability and documentation to be called through inter-process communication. If a host database environment possesses this capability then a version of the file access objects can be created for interfacing with that host. This design provides the ability of these objects to support multiple hosts simultaneously.(SQL only)

## **Data Dictionary**

RPGTRAN reads a RPG program's "I" specs and AS400 "A" specs and builds an internal database of files, fields, and indexes. This information is assembled into a Data Dictionary. RPGTRAN allows the on site engineer to modify the Data Dictionary which is used to write SQL Create Table and Create Index Statements. RPGTRAN also writes a series of programs to convert ASCII flat files into SQL Insert statements. These statements can then be submitted to a host DBMS using a batch SQL submission facility.

## **Code Generation**

RPGTRAN does a literal translation of the Code section of RPG Programs. Because of this a well structured RPG program will be converted to a well structured C++ program, but poorly structured RPG will still be poorly structured C++ when translated. RPGTRAN makes full use of C++ block structures and outputs them in standard indented format which makes IF THEN ELSE and DO WHILE type structures much easier to see and understand than their original RPG counterparts.

RPGTRAN converts execution indicators to structured C++ IF blocks which are easier to read than the equivalent RPG version in most instances.

## **Pricing**

Windows 3.1 version of RPGTRAN is available for \$12,000.00 . This includes a linkable copy of the class libraries which are necessary for a C++ program written by RPGTRAN to execute. A source version of the Class Library is also available for additional cost.

### Execution Environment

RPGTRAN runs on 80386 computers with 6 Megabytes of RAM under Microsoft Windows 3.1 or greater. It also runs under a variety of UNIX platforms. The most popular way of getting the code & data to the destination is to use PC-SUPPORT to copy the RPG source from the AS400, S38, S36 to a PC hard disk and then create a QIC type tape.

RPGTRAN expects the following naming conventions to be followed. RPG source files will be named with the extension .RPG or .R40 or .R3. AS400 physical file declarations are named with the extension .DDS. Logical file declarations are named with the extension .DDL. ASCII fixed length data files are named with the extension .ASC.

RPGTRAN executes quite fast. The current version running under Windows 3.1 will parse about 600 lines a minute and after the Data Dictionary is Edited it will generate Code a little faster than that.

### Availability

RPGTRAN will be available for a number of Unix workstations and it produces code optimized for that platform. The price of RPGTRAN on a given platform is tied to the capacity of the platform. We use a machine class list similar to the one used by Progress to determine the price.

### Run Times

Programs requiring the C++ library also require a runtime fee. Under DOS this fee is \$150.00 per machine. The runtime fee is tied to the execution platform's relative power in other instances.

### SERVICE

RPGTRAN offers translation services during which we will translate your RPG to C++ and will furnish the C++ code back to you. You do not have to purchase the translator to use this service but run time fees will still apply.

An advantage of using the RPG-TRAN service is that you will have our technical expertise available during the translation. If RPGTRAN encounters any constructs in your code, we would then be able to enhance the translator to handle those constructs problems.

If your target environment is not currently supported we can port the tool and the class library to execute under your environment. If you are using our translation service we can do the port for a minimal fee. If you are purchasing the full RPGTRAN translator for that environment we can often times waive the porting fee. The same type of porting support is available to support new DBMS engines.

# RPG TO C++

## Language Translation System

### RPG-TRAN, Inc.

5442 South 900 East Suite #158

Salt Lake City, Utah 84117

**(801)-972-4402**

fax (801)-972-4465

(800)-658-8745

