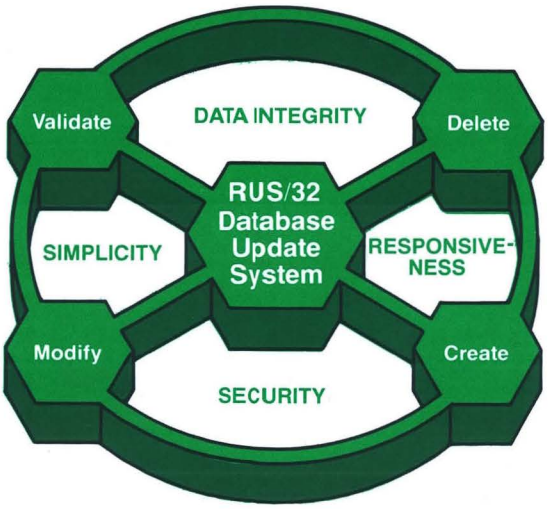
PERKIN-ELMER

PRODUCT BULLETIN

RUS/32

Reliance Update System

Product Overview



RUS/32 is Perkin-Elmer's powerful database update system. RUS/32 is an easy-to-use facility which allows authorized personnel to interactively create, delete or modify records on an as-needed basis. Since RUS/32 is non-procedural, no programming knowledge is required. Staff members of all departments can quickly satisfy their database update requirements by simply stating WHAT data to update, not HOW the system is to update the data. RUS/32 specifications are entered via "fill-in-the-blanks" screen forms with automatic prompting and a user information facility to guide the user in making the request.

RUS/32 is the file entry and maintenance component that runs under the Reliance transaction processing environment which accesses the same database as Reliance applications written in high-level languages, such as COBOL or FORTRAN. RUS/32 readily performs many functions that ordinarily would be performed by custom-written Reliance application programs.

Features

Simple, Fast Information Update

- No knowledge of programming required
- Interactive "fill-in-the-blanks" block mode data entry and update
- Stored "profiles" of create/modify definitions for subsequent use or modification
- Data is immediately available in the database after creation and/or modification
- User information facility
- Automatic screen form generation when a profile is created
- Parameter substitution to allow dynamic execution of saved profiles

Security of Access

- Password control of view definition screens
- Password protection of profiles
- Allow or disallow specific record operations, such as add, delete, or modify
- Protect individual fields in the record against change
- Protect sensitive fields from being viewed by requesting that the field not be displayed
- An optional log of changes made to the database

Benefits

RUS/32 is fully integrated into the Reliance transaction processing system so that the RUS/32 user has the same interface that is employed in the Reliance transaction processing environment. In addition to the simplicity of the screen-oriented usage, the user also receives the following benefits:

Ease of Operation: As no knowledge of programming is required to use RUS/32, management and operating staff can easily enter and update the data they need to satisfy their operational requirements, whenever required.

Rapid Response: RUS/32 response times are equivalent to custom-written user applications.

Timely Data: Since RUS/32 updates the database directly and immediately, the data retrieved by RQL/32, Relational Query Language, user-written applications and RUS/32 always reflects the latest database changes.

Integrity of Data: RUS/32 automatically uses the same data integrity techniques employed throughout Reliance. Thus, the integrity of the data retrieved and updated by RUS/32 is assured.

Security of Data: Various levels of security can be implemented to protect against unauthorized access of data,dataviews and profiles as well as securing sensitive information within the database.

Profiles

A profile is created by any authorized user to define a transaction for updating records in a simple dataview (based on a single DMS/32 file). No programming expertise is required to create or run profiles.

The following details are included in a profile's definition:

- Name of the dataview whose records are to be updated
- Name of the screenform to be generated, if not already present
- Passwords, if required, to protect the profile from unauthorized amendment or use
- Allowable record update methods–any combination of create, modify and delete
- Fields that are to be displayed on the generated screen form and in what order
- Allowable values, either a range or specific, for each field
- Records that are to be retrieved when the profile is run by supplying selection criteria

Associated Screen Form

When a profile is created, a screenform is automatically generated. All fields in the record which are required to be displayed are present on the screenform together with their field titles.

The layout of the screen may, if required, be changed by modifying captions or by re-ordering the fields. This is done using the standard facilities of Reliance PLUS.

Record Update

The record update facilities of RUS/32 allow for the creation, deletion and modification of records in a dataview.

In order to update records in a database, the user must run a profile which defines the:

- Conditions by which records are selectable for update
- Fields to be displayed from the record
- Design of the screen by means of which the user will update the data
- Validation to be applied to the data
- Update operations to be allowed on the data (selected from create, delete and modify)
- Logging of changes made to the database

Record selection can be changed by the user at run time by supplying parameter values to the selection conditions. These controls may be permanently altered by the System Administrator or other authorized person who has access to the profile definition.

Record Creation

If the operation selected is CREATE, the user is presented with a succession of screens on each of which he can create a record to be added to the database.

A field which is defined as mandatory must be supplied with data on each screen.

A field may also be defined in such a way that its contents are reproduced on the next screen which is otherwise empty. This is useful for creating a series of similar records (for example, the members of one department on a personnel file, in which case the department field could be so defined).

Record Modification

The action when the operation selected is MODIFY depends on whether the selection conditions in the profile definition have been parameterized. If they have, the user initially supplies values for the parameters to determine fully which records are to be retrieved.

Records in the dataview are presented in accordance with the selection conditions. Whenever possible records are retrieved by key; however, if a key field is displayed and not protected (and thus can be modified), the retrieval process will not use that key, to avoid the possibility of retrieving the same record more than once.

To avoid inadvertent modification of data, a field may be displayed protected. The fields constituting the primary key of the file and derived arithmetic fields are always protected.

Record Deletion

If the operation selected is DELETE, records are retrieved just as for MODIFY. All of the data fields are protected and the user must confirm the deletion of the record by overtyping a yes/no field.

Validation

Data entered using RUS/32 is validated in up to three different ways as follows:

- ITC character type validation
- ITC specific value and range validation
- Further validation by RUS/32, such as Data Dictionary edit mask comparisons

For some fields, all three methods of validation may be used consecutively. If an error is found, a message is displayed giving the type and attributes of the data required.

Administration

The administration facilities of RUS/32 allow for the creation and maintenance of profile definitions and the maintenance of the log file.

A profile provides a controlled and easy-to-use means of access to the database for the non-technical user. A profile definition consists of two parts: (1) *a stored definition* containing profile attributes and selection conditions for fields and records and (2) *an associated screen form definition* which determines the presentation of the record to the user and the validation to be performed on the data input

The screen form definition is generated automatically when the profile is created and is maintained when the profile is subsequently modified. Both parts of the profile definition can subsequently be modified separately, but the screen form must always remain consistent with the profile.

Record Selection

Records are selected for update by specifying a set of selection conditions when the profile is defined. The format of these conditions is exactly the same as RQL/32.

The value part of a selection condition can be made a parameter, in which case the user must supply the value when the profile is run.

This enables the user to make ad hoc updates without modifying the profile definition. Explanatory text may be associated with each parameter to help the user supply an appropriate value. These features are functionally equivalent to and consistent with RQL/32.

Security

Full security is available with RUS/32 to prevent unauthorized changes to the database.

Within the profile itself, the following restrictions can be included to limit database changes when the profile is run:

- Password protect the profile so that only authorized users can run it
- Disallow one or more record operations so that, for example, records can be modified, but not deleted
- Protect one or more records in the DMS/32 file from modification or deletion by using selection conditions
- Restrict the values that can be entered into a particular field in the record by supplying a range of values or specific values to be validated when creating or modifying records
- Protect individual fields in the record against change
- Protect sensitive fields in a record from being viewed by requesting that the field not be displayed on the generated screenform

In addition, passwords may be applied to either one of the two RUS/32 menus–to the PROFILE menu to prevent unauthorized users from manipulating any profiles, and to the UPDATE menu to prevent them from running any profiles. Field level security is also provided by using dataviews.

System Requirements

Minimum Software Requirement

- OS/32 Revision 6.2 or higher Reliance (or Reliance PLUS) R06 or higher

Minimum Hardware Requirement

- A Perkin-Elmer 32-bit system able to run a Reliance environment.

Product Numbers

S71-040 RUS/32 (Group I System)
S72-040 RUS/32 (Group II System)
S73-040 RUS/32 (Group III System)

Related Documentation

48-108 RUS/32 User Guide

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The information contained herein is intended to be a general description and is subject to change with product enhancement.

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