ALEPH Due Dates and Overdue Fines

2003 NAAUG Meeting; Monday, June 2, 1:00-1:45 PM.

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Outline of topics:

A. Due-date fields in the z36 record and other due dates
B. How due-date fields are used prior to 14.2 rep_change 3666 (and in version 15.2)
C. How due-date fields are used *with* rep_change 3666
D. How are due dates/times calculated?
E. What date displays as the due date?
F. How are regular overdue fines calculated?
G. How are recall overdue fines calculated?

A. Due-date fields in the z36 record and other due dates

There are 3 due dates in the z36 loan record:

1. Z36_DUE_DATE
2. Z36_RECALL_DUE_DATE
3. Z36_ORIGINAL_DUE_DATE

Conceptually, ideally, one might want to have all of these due dates:

1. the original due date
2. the due date for each renewal of the loan
3. the recall due date
4. the due-date before recall (needed to calculate any regular overdue fine and if the recall is cancelled)
5. the current "effective" due-date

B. How due-date fields are used prior to 14.2 rep_change 3666 (& in 15.2)

* z36_due_date is the "current" due date (equal to recall-due-date if recall-due-date is earlier than regular due-date).

* Renewal updates the z36_original_due_date so that the z36_original_due_date functions as pre-recall-due-date.

Problems:

* The actual original due date is not in the z36 record. (It's in the z35 type 62 event record, but that's not viewable online.)

* Sites who want the recall-due-date to display as the "current" due-date, even if it's later than the regular due-date, can't.

* The GUI Circ "Dates" --"Change dates of current loans" function results in incorrect fines (because it doesn't update the z36_original_due_date). (See PRB 4571 for details.)

C. How due-date fields are used *with* 14.2 rep_change 3666 (included in patch 6).

Due-date functions are controlled by TAB10-RECALL-METHOD:

Method# 1: Same as prior to rep_change 3666. (See above.)

Method# 2: Renewals update the z36_due_date. z36_due_date is not changed to the recall-due-date. z36_original_due_date stays as the actual, original due-date. (Renewals do not update it.) The effective due date is the earlier of Z36-RECALL-DUE-DATE and Z36-DUE-DATE when Z36-RECALL-DATE is not zero (recalled) or just Z36-DUE-DATE otherwise.

Method# 3: Same as Method 2, except always use the recall-due-date as the due-date --even if it's later.

Note: In neither version are the due dates of multiple renewals included in the z36 record. The z35 renewal event record *does* have the date each renewal occurred. And the z31 cash record (if the item was overdue when renewed or re-renewed) has the due-date (in the Z31-KEY -- but this, also, is not viewable online).

D. How are due dates/times calculated? (PRB 2158)

The system looks at the Z301 future-due-dates table to get the due date/time. This Z301 Oracle table in constructed by combining information from the ./xxx50/tab/tab16 and tab17 ALEPH tables.

The system first gets the tab16 Group ID for this sublibrary from column 7 of tab_sub_library.eng. It then looks for the line for this Group ID, item status, and borrower status in tab16. Column 6 of this line has a date parameter. This is either the "number of days to add to today's date" or an actual due-date. Column 9 has the due time.

Then the system gets the tab17 Group ID for this sublibrary from column 8 of tab_sub_library.eng. It looks for the lines for this Group ID in tab17 and adjusts the due day/time based on when the library is closed.

This day/time can be affected by such other factors as the borrower expiration date, certain switches, etc. For details, please consult the Web Guide: "Circulation --System Librarian --Due Dates, Fines, & Limits (Section 18.7)". And also section UTIL G-5 of the Database Management Guide (for tab16 and tab17).

Note: You can check what the system thinks the due date/time should be for specific situations in the GUI Circ "--Dates --Setup for future loans" or in the util f/9 ("Display/check due date routine"). If these do not seem to accurately reflect what you see in tab16/tab17, please consult PRB 997 about the handling of Z301.

E. What date displays as the due date?

Prior to 14.2 rep_change 3666 and in version 15.2 (see above), the date which displays is the z36_due_date --the "current" due-date.

With rep_change 3666, the date which displays is the "effective" due-date, based on TAB10-RECALL-METHOD. In some cases the program uses the due_date_format parameter (see rep_change 3666) which allows both the pre-recall-due-date and the recall-due-date to display. A different due_date_format can be specified for the Web vs. the GUI.

F. How are regular overdue fines calculated? (PRB 374)

Regular overdue fines are calculated as follows:

1. If the current date/time is after the Z36-DUE-DATE/Z36-DUE-TIME, then item is considered to be overdue.

2. Assuming that the borrower's IGNORE-LATE-RETURN flag (z305) is set to "N", then Tab18 determines whether a user should be charged for an overdue item. (Y or N for lines 0003 and 0014, late return and late return of issue). If these lines are set to Y, but with zero amount, the system checks tab16 for the fine rate for the defined borrower/item combination. If the line is set to Y with a non-zero amount, then that amount is put into the Z31 cash record (and tab16 is not consulted).

3. If the relevant tab16 entry specifies a grace period (columns 7-10) which is greater than the days/time that the item is overdue, then no fine will be assessed. (Note that, prior to 14.2 rep_change 3666 / 15.2 rep_change 972, the grace period is negated if an overdue notice has been sent.)

4. Otherwise, the system takes the number of days the item is overdue, adjusts it based on the fine method (tab16, column 14), and multiplies it by the per-day fine amount (tab16, column 11).

5. The system takes the result of step 4 and compares it to the maximum fine value (tab16, column 23). It uses the smaller of the two as the overdue fine.

Note1: For details on tab16 or tab18 parameters, consult the Database Management Guide.

Note2: Additional "overdue letter" charges may be specified --see tab32, columns 80-83, 90.

Note3: For recall overdue fine calculation, see PRB# 375.

Note4: For information on calculation of Lost book charges, see PRB# 379.

Note5: The xxx50 util f/10 utility ("Display/check overdue fine calculation") takes a particular sublibrary, borrower status, due date, etc., and tells you what the fine will be. It is *very* useful in identifying problems in tab16 (though it doesn't check tab18).

Note 6: For anomalies relating to incorrect fines and the "Change date" function, see PRBs 1506 and 4571.

G. How are recall overdue fines calculated? [PRB 375]

[Note: If today's date is after the original (pre-recall) due date, then the regular overdue fine is calculated as described in PRB 374. Otherwise, the regular overdue fine is zero.]

Simple answer, for the usual settings:

Situation: the regular due date is Jan. 29; the recall due date is Jan. 12; today is Jan. 22; the TAB10-OVERDUE-RECALL-RATIO is set to "N", the tab18 recall fine is 2.00/day; the fine method is "7" ("open days"); the maximum recall fine is $35.00.

Steps in calculation:

1. Jan. 22 - Jan. 12 = 10 days

2. 10 * 2.00 = $20.00

3. $20.00 is less than the $35.00 max, so $20.00 is the recall overdue fine.

Note: For details on particular tab16 or tab18 parameters, consult the Database Management Guide.

Complete Answer:

1. If the fine method (tab16, column 14) is C, D, E, or 7 (specifying recall fine inclusion), then the system takes the z36_recall_due_date and uses the specified fine method to calculate the number of "recall overdue days". [If the fine method is not one of these four, then the recall overdue fine is always zero.]

2. The system multiplies the # of days from step 1 by the regular per-day fine amount (tab16, column 11) to get the "base" fine.

3a. If the TAB10-OVERDUE-RECALL-RATIO is set to "Y", then the system multiplies the result of step 2 by the recall late return fine ratio (tab18, transaction# 0050).

3b. And then takes the maximum fine value (tab16, column 23) and multiplies it by the recall fine limit ratio (tab18, transaction# 0052).

3c. The smaller of 3a and 3b is the recall overdue fine.

4a. If the TAB10-OVERDUE-RECALL-RATIO is set to "N" (indicating that you want it to be treated as an actual amount rather than a ratio), then it multiplies the number of days from step 1 by the recall late return fine value (tab18, transaction# 0050).

4b. And then uses the recall fine limit value (tab18, transaction# 0052) as the limit.

4c. The smaller of 4a and 4b is the recall overdue fine.

Note that in addition to the recall overdue fine, if the item has passed the pre-recall overdue date, a regular overdue fine will be created.

Note: Rush recall fine calculation is exactly the same as the preceding calculation except: tab18, transaction# 0051 is used for the late return fine ratio (rather than 0050) [step 3a] and tab18, transaction# 0053 is used for the fine limit ratio (rather than 0052) [step 3b or 4b].

Note that the version of this PRB which we originally posted had a calculation of the recall fine based on 14.2 rep_change 2777. This rep_change was not part of the patch 2 which 14.2 sites have been using and is superceded in what we sending out in patch 4.