Problematic effects of data translation in JIS applications. Request ID: 127

Request Status Summary

Request Status Awaiting Endorsement

Request Detail

Requestor Name:
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Origination Date:
01/23/2012

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Requestor Phone:
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Recommended Endorser:
Data Management Steering Committee

Request Type: Change or Enhancement

Which Systems are affected?
Judicial Information System (JIS)
Superior Court Management Information System (SCOMIS)
Data Warehouse
Juvenile and Corrections System (JCS)
Judicial Receipting System (JRS)
Judicial Access Browser System (JABS)
Possible Case History (PCH)
Case and Criminal History (CACH)

Other affected Systems / Business Processes Data exchanges. New case management system.

Business Area: Other

Communities Impacted:
Appellate Court Judges
Appellate Court Clerks
Superior Court Judges
County Clerks
Superior Court Administrators
CLJ Judges
CLJ Managers
Family and Juvenile Law Judges
Juvenile Court Administrators
State Agencies
Public and Other Users

Impact if not Resolved: High

Impact Description:

High impact by data corruption.

Medium to low impact by data inconsistency, depending on the volume and type of the inconsistent data.

What is the Business Problem or Opportunity

The Problem.

The JIS mainframe applications perform data translation on input data, e.g. lower case to upper case. The translations were orginally implemented to prevent input and storage of inconsistent or garbage data. With the use of more PC based applications by the courts the translations may affect the quality of data in the JIS applications and affect exchanges of data between JIS and client courts' and other agencies' applications.
1. There is potential for corruption of data in JIS.
2. There is potential for inconsistent data in JIS.
3. Corrupt or inconsistent data may cause problems using the data in JIS applications and in exchanging data with court and agency client applications.

The translations are described in detail below under Technical Details.

What this means for data exchange clients.

Input
When formatting input for the JIS data exchanges the client must be aware of how the translations will affect the way the client's data is stored and displayed to other courts by the JIS applications. In particular if the client court application supports the full extended English character set that is commonly available on most personal computer systems, e.g. systems based on the Microsoft Windows software, then the client should perform some translation of the data to enable it to be correct and consistent when stored in the JIS applications, particularly in person and organization names and addresses.

Example:

1. If the client application contains the name "González" the accented "á" should be translated to an unmarked "a" before sending the name to JIS, e.g. "González" should be sent as "GONZALEZ". Otherwise the name "González" will be translated into the corrupted "GONZ LEZ".
2. In fields that are not subjected to the additional translation, such as the case title, "González" will become the inconsistent "GONZáLEZ".

Output
When receiving output from a JIS data exchange the court should expect upper case data.

Example:

In JIS the name "González" is usually entered by court staff as "GONZALEZ". This is the form that will be

sent out by AOC data exchanges.

Technical details:

The JIS and SCOMIS applications translate lower case English characters to upper case without error or warning before they are stored. Non-English lower case letters with diacritical marks are not translated to their upper case form. Non-English letters with diacritical marks are not translated to the unmarked form of the letter.

Exception:
Certain screens in the JIS and SCOMIS applications will accept mixed upper and lower case data.

Additional translation performed on certain database columns:
The following translations are applied to the JIS database columns listed in the table below:

First the lower case to upper case translation described above is performed by the JIS or SCOMIS application. Then the database management system performs a further translation on the columns listed in the table below to allow only the following subset of the character set:

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890
<>(){}/\¢$-+=|¦&.,:;!?*¬^%~#@'`" and underscore.
The bold hyphen (EBCDIC X'CA') is translated to the standard hyphen (EBCDIC X'60').

All other display and non-display characters in the extended English character set are translated to a *space* (EBCDIC X'40') without error or warning. In particular non-English language letters with diacritical marks are translated to spaces.

Table Name	Table Description	Column Name	Column Description
AD	Address	AD_CTY_NM	City Name
AD	Address	AD_TX_1	Street Address Line 1
AD	Address	AD_TX_2	Street Address Line 2
AD	Address	AD_ZIP_CD_NU	ZIP Code
CS	Case	CS_NU	Case Number
INV	Individual	INV_DRV_LIC_NU	Driver License Number
ICH	Individual Change History	INH_DRV_LIC_NU	Driver License Number
PER	Person	PER_NM	Person Name
PHN	Telephone Number	PHN_ARA_NU	Area Code
PHN	Telephone Number	PHN_PRE_NU	Prefix
PHN	Telephone Number	PHN_SUF_NU	Line
PHN	Telephone Number	PHN_XTN_NU	Extension

These translations were in place when this was written in January 2012.

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Target changes:

Short term:

To prevent data corruption the DB2 triggers should be modified to translate lower case and upper case alphabetic characters with diacritical marks to the upper case unmarked version of the letter.

Medium term:

To improve data consistency in the legacy applications the general lower case to upper case translation should translate letters with diacritical marks to the unmarked version.

Long term:

In the future applications that accept, store, and display mixed case and Roman alphabet based foreign language characters must provide methods to compare and search on fields, primarily names, in a consistent manner. Example: an application should be able to search on the name "Gonzalez" and select variants such as "GONZALEZ" and "Gonza'lez" as possible matches.

Handling of non-Roman alphabet character sets supported by the Microsoft Windows software, e.g. Arabic, Cyrillic, Greek, etc., should be addressed but not necessarily supported by JIS applications.

Expected Benefit:

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1. Prevent data corruption in JIS applications.
2. Enable consistent storage of data in JIS applications.
3. Enable consistent exchange of data between JIS and local court and agency applications.