BR_Substitution – Substitution Services

Revision history

2017-05-02	Robin Lamacraft	Original draft
2018-04-13	John Lucas	Minor edits
2018-05-31	Don Ferguson	Removed DB tables, changed to DB table references

NB: this documentation needs review to ensure it is aligned with HRE current Substitution design.

SCOPE

This module must be used anywhere an Encoded String requires substitution variable syntax checking or when the Encoded String has the substitution variables replaced with data values. Substitution values have 2 forms, a standardized language-independent form and a user-language dependent form. Essentially substitution variables are always stored using the language independent form and the user has the option to view or edit the Encoded String in either form.

Substitution Variables are classified by 5 attributes:

1. The type of data value to be output (e.g. text, date, number, etc)
2. The method to compose that data
3. The owner record type of that data
4. The subject object type in the request chain to access the data
5. The number of steps in the request navigation path.

By holding these as classification fields in the Substitution Dictionary, the same dictionary can be used for all substitution operations.

Substitution Variable Syntax

In the following examples, the choice of characters is not final except for the outer closure symbols "[&" and "&]". These special pairs of characters shall not occur in any text (e.g. memos or sentences) where they are substitution variable delimiters. These consistent delimiters mark the parsing of encoded strings. The type of substitution is controlled by the 3rd character if it is not a letter. Terms can form chains by a period "." being placed between them. When entered in the user data language (English in this example) they would be shown to the user as:

- **[&subject.name&]** – substitutes the subject.name where "subject" and "name" are aliases created by the system or by the user for a language –independent access components **%SUBJ%** and **%NAME%**
- **[&%SUBJ%.%NAME%&]–** substitutes the subject.name
  - **[&^S^&]**– substitutes the subject.name as if in TMG it was **[S].** That is internally **^S^** is aliased to **%SUBJ%.%NAME%**

  NOTE: All TMG sentence substitution variables will be available in this form.

Other examples (beyond TMG):

- **[&subject.birth.year&]** – substitutes the subject's birth year
- **[&%SUBS%.%BIRTH%.%YEAR%&]** – substitutes the subject's birth year
- **[&subject.father.birth.year&]** – substitutes the subject's father's birth year
- **[&%SUBS%.%FATHER%.%BIRTH%.%YEAR%&]** – substitutes the subject's father's birth year

Conditional substitution examples:

- **[&<** and served in **[&memo2&]>&]** – conditionally inserts non-blank memo2
- **[&<** and served in **[&%MEMO2%&]>&]** – conditionally inserts non-blank memo2

Conditional substitution examples (beyond TMG):

- **[&?** *Test* **:?:** *Output if TRUE* **:|:** Output if FALSE **?&]** – conditionally output content depending on the result of the test
- **[&?** ([&%subject%.%sex%&] = ”M”) **:?:** his **:|:** her **?&]** – if subject is male output “his” or “her” otherwise

ACTIONS

1. To define or modify a Substitution Dictionary entry: Create, Edit, Save and Select
2. To define or modify a language-specific alias for a substitution variable or part of it: Create, Edit, Save and Select
3. To return a substation variable in the language-independent form or language dependent form
4. On request with a HRE_ID of the subject type, return the data value of the substation variable.

USED BY

Any use of an encoded string.

DATA CONTROLLED BY THIS MODULE

Refer to Database tables #876-884.

REQUIRED SERVICES

1. BR_EntityLink
2. BR_Translation.

WARNING CONDITIONS

1. Need details of the condition that raised the warning, example message and possible next steps.

ERROR CONDITIONS

1. Need to record the condition that raised the error, example message and possible next steps.