Vectored GVA's

1. Introduction

The concept of "Occurrences" of a field will be extended. A field that has more than one ocurrence is a "vector" in the mathematical sense. This count is already in the A3 record in the DBX Dictionary but is not currently implemented.

Both GVF's and GVA's are Fields so we have Vectors of GVF's and GVA's.

The idea provides for the following 4 extra GVF/GVA relations:

1. Element of a GVF Vector to an Element of a GVA Vector, i.e. GVF-A (n) to GVA-B (m). The current relationship would just default to GVF-A(1) to GVA-B(1).

2. Sum of a GVF Vector to a GVA Element (or individual GVA), i.e GVF-A (1) + GVF-A(2) +...GVF-A(na) to GVA-B(m). This could also be extended to a sub-group of the GVF, e.g. GVF-A(s) to GVF-A(f) where f>s and 1<= s<na and 1<f<=na.

3. GVF Element (or individual GVF) to a GVA Vector, i.e.GVF-A(x) to GVA-B(1), ... GVA-B(nb). Again this could be extended as in (2).

4. A GVF Vector to a GVA Vector, i.e. GVF-A(sf) to GVA-B(sa), GVF-A(sf+1) to GVA-B(sa+1),.....GVF-A(sf+n) to GVA-B(sa+n). Where sa,sb and n are restricted to keeping the operations within the Vectors.

The extra tasks, to the Gateway, that are needed are:

- Modifications of $DXM to define these relationships and put the appropriate A6 records into the Dictionary.

- Minor modifications of $DXU to adapt the new A6 records into the BDCF File.

Modifications to the $SDL32 Compiler to handle these Vectors, probably just as an OCCURS item.

Currently the GVF/GVA calculations are mimicked in the DLM's this could be restricted to not include this new feature.

The concept still fits in with Cascading GVF's as any GVF that was also a GVA would have it's individual elements Cascade.