Accessing. The user accesses geometric data stored by IPIP through DML commands inserted in a Fortran application program. The program is then precompiled by the IPIP precompiler, which replaces the DML commands with executable Fortran statements. The program can then be Fortran compiled, linked with IPIP interface routines, and executed.

DML commands. The DML commands currently available in IPIP for use with schemas containing structures are STORE, FIND, FETCH, and DELETE. Commands not yet implemented include MODIFY, COPY, and REMOVE.

DML commands can be used with any record type in the external schema. Record types exist for primitive entities (e.g., points or vectors), geometric aggregates of primitives (e.g., lines), and geometric parts or objects that are aggregates of other entities. The user can thus manipulate the geometric data at varying levels of complexity.

For example, the following DML command would store a linear line segment.

@STORE SEGID='SEGMENT 1', STYPE='LINEAR', SPOS1='POINT1', SPXYZ1=(1.0,1.0,1.0), SPOS2='POINT2', SPXYZ2=(2.0,2.0,1.0) IN RECORD SEGMNT, RETAINING ALL CURRENCY,ECHO;

The following would then retrieve the first-position vector.

@FETCH FIRST VECTOR (1) WHERE VECTID='POINT1';

Figure 4. Structure diagram for a segment.

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