TextEdit Data Structures

This section supplies a brief overview of the contents of the various **TextEdit** data structures and their relationships. The figure below shows how the **TextEdit** data structures create an environment for the editing of unstyled or styled text through the use of an edit record and a style record. It also portrays a number of supporting data structures, including a style run table, a line-height table, a null style record, a style scrap record, and a TextEdit dispatch record.

> **Note:** Use the information in this diagram and in the explanations that follow only for debugging so you understand the organization of the **TextEdit** data structures. For reading or writing of these data structures, use the **TextEdit** routines. This practice will ensure future compatibility.

Here is a list of the functions and relationships of the **TextEdit** data structures:

- The edit record, defined by the TERec data type, stores the display and editing information for **TextEdit**.
- The style record, defined by the TEStyleRec data type, stores the style information for the text of the edit record. If an edit record has associated style information, its txFont and txFace fields combine to hold a style handle, TEStyleHandle, to its style record.
- The style run table, defined by the StyleRun data type, is an array that contains the boundaries of each style run and an index to its style information in the style element array.
- The style element array, defined by the TEStyleTable data type, contains one entry for each distinct style used in the text of the edit record. Each style entry is defined by the STElement data type. The styleTab field of the style record contains a handle, STHandle, to this style element array. The styleIndex field in the style run array is an index into this data structure.
- The line-height table, defined by the LHTable data type, provides an array of line heights to hold the vertical spacing information for a given edit record. It also contains line ascent information. **TextEdit** uses this table only if the lineHeight field in the edit record is negative. The lhTab field of the style record contains a handle to this line-height table. A line number is a direct index into this array.
- The null style record, defined by the NullStRec data type, contains the style information for a null selection. The nullStyle field of the style record contains a handle to this null style record.
- The style scrap record, defined by the StScrpRec data type, is a place to store style information in the desk scrap. The scrap style table array within this record, defined by the ScrpStyleTab data type, contains a separate data structure for style records in the scrap. The nullScrap field of the null style record contains a handle, STScrpHandle, to the scrap style table.
- The scrap style table, defined by the ScrpStyleTab data type, is contained in the style scrap record. The elements of this table are

style records defined by the scrap style element record.

- The scrap style element record, defined by the ScrpSTElement data type, contains the style information for an element in the scrap style table and is similar to the style element array. One scrap style element record exists for each sequential style change in the scrap style table.

- The TextEdit dispatch record, defined by the TEDispatchRec data type, contains the internal addresses of the **TextEdit** routines for EOLHook, DRAWHook, WIDTHHook, HITTESTHook, nWIDTHHook, and TextWidthHook unless you replace them with the addresses of your own customized versions of these routines. **TextEdit** combines the recalBack and recalLines fields of the edit record to store a handle to the TextEdit dispatch record.

- The text style record, defined by the TextStyle data type, furnishes a record of text styles for communicating information between your application and the **TextEdit** routines.

Warning: The space beyond the hooks in the TextEdit dispatch record is reserved for internal use. If you attempt to use this private area, you will corrupt **TextEdit** data.