

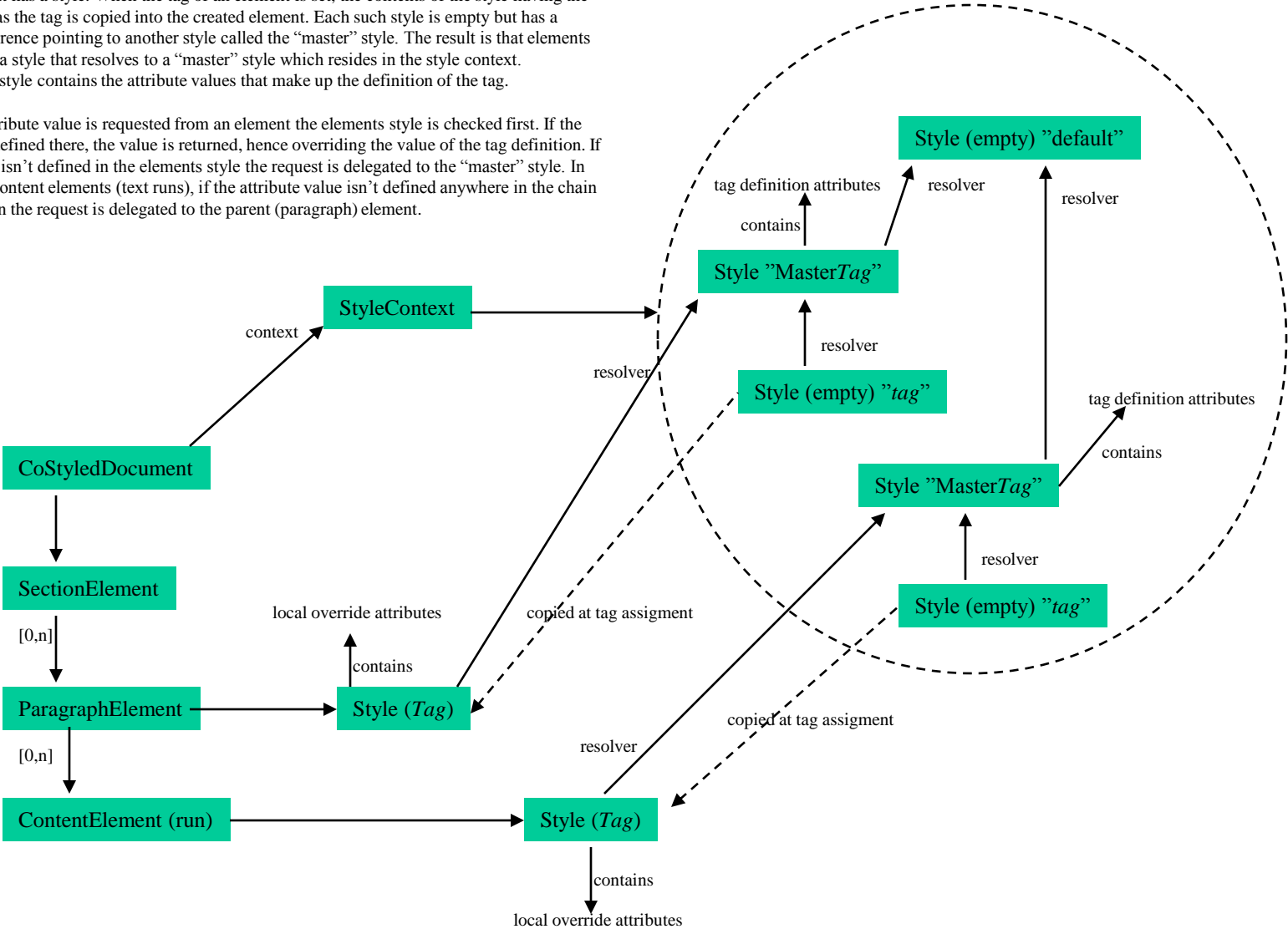
Formatted text is implemented by the class CoStyledDocument. It holds a 3-level tree structure of elements. This structure models the structure of the text. At the top there is a section element. The level below contains paragraphs. The paragraphs contains runs of text. A run of text is a sequence of characters all formatted in the same way.

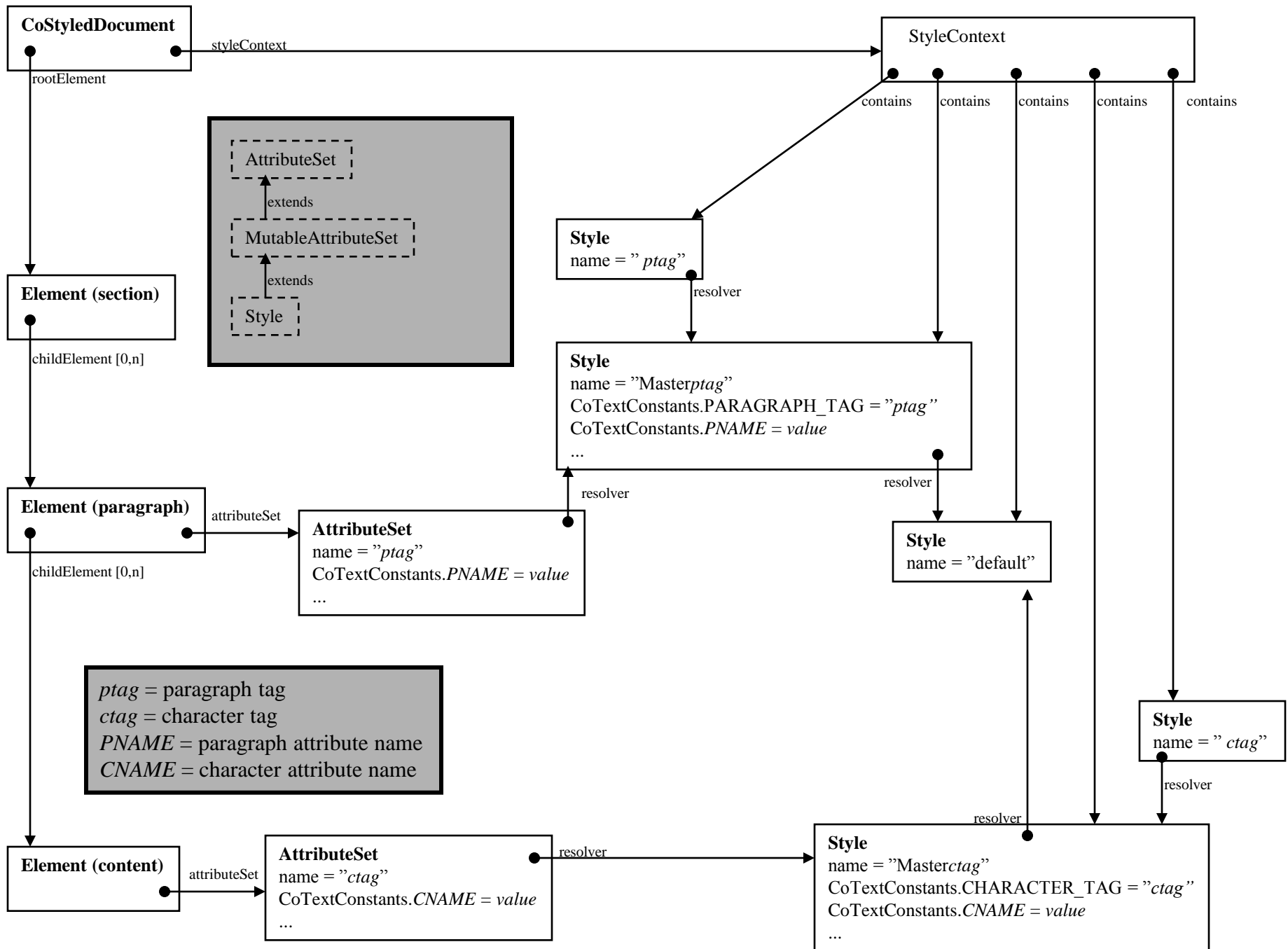
The document also owns a style context. A style context is a collection of styles. A style is a named attribute set which has a resolver reference. If a requested attribute value can't be found in a style then the request is delegated to the resolver. This makes it possible to create chains of styles.

Each element has a style. When the tag of an element is set, the contents of the style having the same name as the tag is copied into the created element. Each such style is empty but has a resolver reference pointing to another style called the "master" style. The result is that elements end up with a style that resolves to a "master" style which resides in the style context.

This master style contains the attribute values that make up the definition of the tag.

When an attribute value is requested from an element the elements style is checked first. If the attribute is defined there, the value is returned, hence overriding the value of the tag definition. If the attribute isn't defined in the elements style the request is delegated to the "master" style. In the case of content elements (text runs), if the attribute value isn't defined anywhere in the chain of styles then the request is delegated to the parent (paragraph) element.





Before formatted text is displayed, the definitions of the paragraph and character tags must be copied into the style context of the document. This process is referred to as “applying a text style”. Tag definitions are stored in instances of CoTypographyRule. Transforming the style context into an equivalent of the typography rule involves two phases:

First all tags having a definition in the typography rule but not in the style context are added to the style context.

Then all tags in the style context are traversed. Those that appear in the typography rule are copied into the style context and the others are clear of attribute values and marked as being deleted (deleting them isn’t a good idea since there might exist elements that refer to them as their resolver).

