

Merging

FOSI's ability to specify formatting in different ways can result in more than one spec for the same characteristic. The characteristics specified in `charsubsets` and attribute rules may include some that are already coded directly in the `charlist`. For example, the `charlist` may contain a font category with `weight="bold"` and also reference a `charsubset` that specifies `weight="medium"`.

The process of producing a merged `charlist` from referenced `charsubsets`, the `charlist`, and attribute rules is as follows:

1. All `charsubsets` referenced by the `charlist` `charsubsetref` are merged together in the order referenced.
2. All categories specified in the `charlist` are merged into the result of the previous step according as follows:
 - For nonrepeating categories, a characteristic specified in a referenced `charsubset` is used if the same characteristic is not coded directly in the `charlist`. However, when a characteristic is coded directly in the `charlist`, it overrides the same characteristic coded in a referenced `charsubset`.
 - For repeating categories, any categories coded directly in the `charlist` are appended to repeating categories specified in a referenced `charsubset`.
3. Inheritance and defaulting occur.
4. `charsubsets` that are part of successful attribute rules are merged in order into the result of the previous step.

MERGING EXAMPLES

In the following example, the `weight` characteristic is added to the `e-i-c`. Missing font characteristics for `<title>` are inherited from its parent, another ancestor, or eventually from the `docdesc` or system defaults.

FOSI fragment

```
<charsubset charsubsetid="bold">
<font inherit="1" weight="bold">
...
<e-i-c gi="title">
<charlist inherit="1" charsubsetref="bold">
<font inherit="1" famname="Arial">
...>
```

TIP

Probably the easiest way to understand merging is to use the Resolve feature in the FOSI style panels interface to trace each resolved characteristic to its source. This is covered in **FOSI Quickstart Tutorial #1-6**.

In the next example, <subtitle> is positioned flush left because quadding quad="left" lastquad="left" coded directly in the e-i-c for <subtitle> overrides the center charsubset in the title charsubset.

FOSI fragment

```
<charsubset charsubsetid="center">
<quadding inherit="1" quad="center" lastquad="lcenter">
...
<charsubset charsubsetid="title" charsubsetref="block center bold">
...
<e-i-c gi="subtitle">
<charlist inherit="1" charsubsetref="title">
<quadding inherit="1" quad="left" lastquad="lleft">
...

```

The following example is equivalent to the previous example. The e-i-c for <subtitle> calls the charsubsets title and left. Since the charsubset left is referenced last, its formatting is used.

FOSI fragment

```
<charsubset charsubsetid="center">
<quadding inherit="1" quad="center" lastquad="lcenter">
...
<charsubset charsubsetid="left">
<quadding inherit="1" quad="left" lastquad="lleft">
...
<charsubset charsubsetid="title">
<font inherit="1" weight="block center bold"
...
<e-i-c gi="subtitle">
<charlist inherit="1" charsubsetref="title left">
...

```

Continuing the previous example, if the e-i-c for <subtitle> references the charsubsets as shown below, <subtitle> is centered.

```
<e-i-c gi="subtitle">
<charlist inherit="1" charsubsetref="left title"></charlist>
...

```

NOTE: In the above examples, quadding lastquad is specified. Usually, lastquad is allowed to default to the docdesc, which is usually coded with quadding lastquad="relative" so the alignment of the last line changes automatically with the alignment of the rest of the block element. However, multi-line titles generally look better when they are not formatted like paragraphs.

In this example, an attribute rule specifies a font characteristic to be merged into the charlist. Notice `weight="medium"` must be specified in order to override the default characteristic value (**bold**) coded in the charlist. Otherwise, the output is in bold italic.

Figure 4 Successful attribute rule overrides charlist coding

XML fragment

The term `<emphasis>structured markup</emphasis>` is `<emphasis role="italic">not</emphasis>...`

FOSI fragment

```
<charsubset charsubsetid="bold">
<font inherit="1" weight="bold">
...
<e-i-c gi="emphasis">
<charlist inherit="1" charsubsetref="bold"></charlist>
<att>
<specval attname="role" attval="italic">
<charsubset>
<font inherit="1" posture="italic" weight="medium">
...

```

In the FOSI code above, `posture="italic"` and `weight="medium"` are specified in a font category coded in the charlist. The code below would have the same effect

FOSI fragment

```
<charsubset charsubsetid="bold">
<font inherit="1" weight="bold">
...
<charsubset charsubsetid="italic">
<font inherit="1" posture="italic">
...
<charsubset charsubsetid="medium">
<font inherit="1" weight="medium">
...
<e-i-c gi="emphasis">
<charlist inherit="1" charsubsetref="bold"></charlist>
<att>
<specval attname="role" attval="italic">
<charsubset charsubsetref="medium italic">
<font inherit="1" posture="italic" weight="medium">
...

```