

# DICOM Correction Proposal

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Correction Number	CP-1776
Log Summary:	No quote in multipart media type parameter
Name of Standard	PS3.18 2023a
Rationale for Correction:	<p>There is inconsistency in whether or not quotes are required around the type parameter in multipart/related media types. PS3.18 currently specifies that double quotes are required for the sub-type. Previously, PS3.18 had required the quotes to be absent, then it was changed in Sup 183 to require them.</p> <p>RFC 2387 is the normative reference and does not use quotes around the type parameter:</p> <p>3.4 Syntax</p> <pre>related-param := [ ";" "start" "=" cid ]                 [ ";" "start-info" "=" ( cid-list / value ) ]                 [ ";" "type" "=" type "/" subtype ]</pre> <p>RFC 7230 updates this in general for media-type parameters allowing them to be quoted, but not specifying multipart related syntax in specific.</p> <p>The proposed change will allow the quotes to be present but not require them, and describe the inconsistency.</p>
Correction Wording:	

*In PS 3.18, change the text as follows:*

## 8.7.1 Multipart Media Types

Some of the services defined in this Part of the Standard support the multipart media types [RFC2387]. The syntax is:

```
multipart-media-type = "multipart" "/" subtype *( OWS ";" OWS parameter )
```

The application/multipart-related media type is used by the RESTful services. Its syntax is:

```
multipart-related = "multipart/related"
                   OWS ";" OWS "type" "=" (media-type / DQUOTE media-type
DQUOTE)
                   OWS ";" OWS "boundary" "=" boundary
                   [related-parameters]
```

Where

```
boundary                ; See Section 8.6.1.2.1

bchar = bchar-nospace / SP
bchar-nospace = DIGIT / ALPHA / "'" / "(" / ")" / "+" / "_" / "," / "-"
               / "." / "/" / ":" / "=" / "?" / "/" / ":" / "=" / "?"
related-parameters = [";" "start" "=" cid]
                   [";" "start-info" "=" cid-list]
cid-list = cid cid-list
cid = token / quoted-string
```

The "type" parameter is required. It contains the media type of the "root" body part. It ~~always contains the special character "/" and thus requires~~ **should not contain quote marks per [RFC2387](#), but for historical compatibility and to agree with the RFC2387 examples, it may contain** quote marks.

**Note: Some origin servers have been observed to fail if quotes are present, and others may fail if quotes are absent, so user agents may want to handle such failures by trying the alternative pattern.**

The cid is a content identifier. It should be unique for each part of the multipart message.

Typically, the "start" and "start-info" parameters are not specified, and the "root" is the first body part.

*In PS 3.18, for reference unchanged:*

#### 8.7.3.5.1 DICOM Multipart Media Types

The syntax of multipart media types is:

```
dcm-multipart = "multipart/related"
               OWS ";" OWS "type" "=" dcm-mp-mt-name
               OWS ";" OWS "boundary=" boundary
               [dcm-parameters]
               [related-parameters]
```

Where

```
dcm-mp-mt-name = dicom-mt-name / rendered
```

See Section 8.6.1.2.1 for the definition of boundary and related-parameters.

Each multipart media type shall include a "type" parameter that defines the media type of the parts and shall also include a "boundary" parameter that specifies the boundary string that is used to separate the parts. For example:

```
Accept: multipart/related; type="application/octet-stream", multipart/related;
type="image/*"; boundary=**, multipart/related; type="video/*"; boundary=**
```