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On Media-Types, Content-Types, and related terminology
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Abstract

There is a lot of confusion about media-types, content-types, and related terminology.

This memo is an attempt at clearing it up.

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[1.](#) Introduction

[RFC1590] introduced media types and their registration. That document took MIME types from [[RFC1521](#)] and gave them a new name. At that time, the term "media type" was often used just for the major type ("text", "audio"), and what we call a media-type now was the combination of a type and a subtype. This lives on in [[RFC6838](#)], which does not even have an ABNF production for media type:

```

type-name = reg-name
subtype-name = reg-name

reg-name = 1*127reg-name-chars
reg-name-chars = ALPHA / DIGIT / "!" /
                "#" / "$" / "&" / "." /
                "+" / "-" / "^" / "_"

```

[2.](#) Media-Type

However, the term "media type" is now generally used for a registered combination of a type-name and a subtype-name, as in

```
Media-Type = type-name "/" subtype
```

For the purposes of this memo, we define:

Media-Type: A combination of a type-name and a subtype-name registered in [[IANA.media-types](#)], conventionally identified by the two names separated by a slash.

3. Content-Type

Media types have parameters [[RFC6838](#)], some of which are mandatory. In HTTP and many other protocols, these are then used in a "Content-Type" header field. HTTP [[RFC7231](#)] uses:

```
Content-Type = media-type
media-type = type "/" subtype *( OWS ";" OWS parameter )
type       = token
subtype    = token
token      = 1*tchar
tchar      = "!" / "#" / "$" / "%" / "&" / "'" / "*"
           / "+" / "-" / "." / "^" / "_" / "`" / "|" / "~"
           / DIGIT / ALPHA
OWS        = *( SP / HTAB )
```

We don't follow the inclusive use established by [[RFC2616](#)], parts of which became [[RFC7231](#)], to use the term media-type for a Media-Type with parameters; note that [[RFC2616](#)] was quite confused about this by claiming ([Section 3.7](#)):

Media-type values are registered with the Internet Assigned Number Authority (IANA [19]).

This clearly reverts to the understanding of Media-Type we use. We instead define as a separate term:

Content-Type: A Media-Type, optionally associated with parameters (separated from the media type name and from each other by a semicolon).

Removing the legacy HTAB characters now shunned in polite conversation, we define the conventional textual representation of a Content-Type as:

```
Content-Type = media-type *( *SP ";" *SP parameter )
```

4. Content-Coding

[[RFC2616](#)] also introduced the term Content-Coding, a registered name for an encoding transformation that has been or can be applied to a representation:

```
content-coding = token
```

Confusingly, in HTTP the Content-Coding is then given in a header field called "Content-Encoding"; we NEVER use this term (except when we are in error). Instead we define:

Content-Coding: a registered name for an encoding transformation that has been or can be applied to a representation.

Content-Codings are registered in the HTTP Content Coding Registry, a subregistry of [[IANA.http-parameters](#)]. We often use the "identity" Content-Coding, which is the identity transformation, and often fail to identify that Content-Coding by name, instead calling it "no Content-Coding".

5. Content-Format

CoAP [[RFC7252](#)] defines a Content-Format as the combination of a Content-Type and a Content-Coding, identified by a numeric identifier defined by the "CoAP Content-Formats" registry (a subregistry of [[IANA.core-parameters](#)]), but in more confusing words (it did not have the benefit of the present memo).

Content-Format: the combination of a Content-Type and a Content-Coding, identified by a numeric identifier defined by the "CoAP Content-Formats" registry.

Note that there is no conventional string representation of just the combination of a Content-Type and a Content-Coding; Content-Formats are always identified by their registered Content-Format numbers.

6. Abbreviations

Media-Types are sometime abbreviated as "mt", and Content-Types as "ct". We do not propose to use those abbreviations: Where the long form of the values can be used, the long form "Content-Type" can also be used to name them.

For historical reasons, both [[RFC6690](#)] and [[RFC7252](#)] use the abbreviation "ct" for Content-Format (think first and last character).

For Content-Coding, the abbreviation "cc" can be used.

7. Discussion

The ABNF given here is provisional and needs to be cleaned up: We need to unify the various forms of reg-name, token, etc. We need to define parameter. We also need to typographically differentiate foreign ABNF just shown for illustration from the normative ABNF of this memo.

We need to discuss case-insensitivity, which is usually rather insensitive.

8. IANA Considerations

While this memo talks a lot about IANA registries, it does not require any action from IANA.

9. Security Considerations

Confusion about terminology may, in the worst case, cause security problems. No other security considerations are known to be raised by the present memo.

10. References

10.1. Normative References

- [IANA.core-parameters]
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10.2. Informative References

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