RFC2616bis BNF Conversion

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Problem Statement

- RFC2616 uses a BNF syntax derived from RFC822, not ABNF as defined in RFC4234bis

  …with custom extensions: list rule (*#rulename*)

  ```
  Allow = "Allow" ":" #Method
  ```

  …with custom rules („implicit LWS"):

  „The grammar described by this specification is word-based. Except where noted otherwise, linear white space (LWS) can be included between any two adjacent words (token or quoted-string), and between adjacent words and separators, without changing the interpretation of a field. At least one delimiter (LWS and/or separators) MUST exist between any two tokens (for the definition of "token" below), since they would otherwise be interpreted as a single token."

  see Section 2.1:
  http://tools.ietf.org/html/rfc2616#page-15

Tools

- All BNF productions in the XML versions of the spec have been marked up as BNF, so they can be automatically extracted, verified and tracked

Extraction:

http://greenbytes.de/tech/webdav/rfc2629xslt/rfc2629xs

Verification: Bill Fenner's ABNF Parser (BAP)
http://code.google.com/p/bap/
Hack for RFC2616 rule production: patch attached as issue #3

Tracking:

http://www.w3.org/Protocols/HTTP/1.1/rfc2616bis/draf

Plan (1/3)

Fix problems in current BNF causing it not to parse in BAP

1. Rule names containing underscores
2. Missing Whitespace
3. Duplicate rule names (rule names are case-sensitive, thus „trailer" == „Trailer")
4. Multi-line prose values
5. Prose values that can be rewritten as more precise rules
6. Attempts to use BNF that do not work:

```
chunk-data = chunk-size(OCTET)
```

…done in „–latest".

Plan (2/3)

7. Language tags (Section 3.10)
  - Refer to RFC4646 instead of RFC1766.
  - Refer to RFC4647 for definition of Language-Range and matching (?)
  - The spec currently copies the whole grammar, but the new one is much more complex – just reference it?
    - (see http://tools.ietf.org/html/rfc4646#section-2.1)

8. HTTP URL (Section 3.2)
  - Refer to RFC3986 instead of RFC2396
  - Be careful when rewriting the BNF (non-obvious changes in rules?)

… not done yet.

Plan (3/3)

Choose strategy for switchover to RFC4234bis syntax

1. What to do with the list rule – convert? Such as in:

```
Allow = "Allow" ":" #Method


Allow = "Allow" ":" [ *LWS Method ]
                    *( *LWS "," *LWS Method )
```

2. What to do with implicit LWS.