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## The application/whoispp-query Content-Type

### Status of this Memo

This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

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### Abstract

This document defines the expression of Whois++ protocol (RFC 1835) queries within MIME (Multipurpose Internet Mail Extensions) (RFC 2046) media types. The intention of this document, in conjunction with RFC 2958 is to enable MIME-enabled mail software, and other systems using Internet media types, to carry out Whois++ transactions.

### 1. MIME Registration Information

To: iana@isi.edu  
Subject: Registration of MIME media type application/whoispp-query

MIME Type name:           Application  
MIME subtype name:       whoispp-query  
Required parameters:     none  
Optional parameters:    none

Encoding considerations: Any valid MIME encodings may be used

Security considerations: This content-type contains purely descriptive information (i.e., no directives). There are security considerations with regards to the appropriateness (privacy) of information provided through the use of this content-type, and the authenticity of the information so-provided. This content-type

provides no native mechanisms for authentication.

Published specification: this document

Person & email address to contact for further information:

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Intended usage: common

## 2. whoispp-query Syntax

The following grammar, which uses BNF-like notation as defined in [RFC2234] defines the set of acceptable input to a Whois++ server. As such, it describes the expected structure of a whoispp-query media type object.

N.B.: As outlined in the ABNF definition, rule names and string literals are in the US-ASCII character set, and are case-insensitive.

```

whois-command  = ( system-command / terms [":" globalcnstrnts] )
                  nl

system-command = "constraints" / "describe" / "commands" /
                  "polled-by" / "polled-for" / "version" / "list" /
                  "show" [1*sp bytestring] / "help" [1*sp
                  bytestring] / "?" [bytestring]

terms          = and-expr *("or" and-expr)

and-expr       = not-expr *("and" not-expr)

not-expr       = ["not"] (term / ( "(" terms ")" ))

term           = ( generalterm / specificterm / combinedterm )
                  localcnstrnts

generalterm    = bytestring

specificterm   = specificname "=" bytestring

specificname   = "handle" / "value" / "template"

combinedterm   = attributename "=" bytestring

globalcnstrnts = globalcnstrnt *("; " globalcnstrnt)

```

```

globalcnstrnt = "format" "=" format / "maxfull" "=" 1*digit /
"maxhits" "=" 1*digit / "case" "=" casevalue /
"search" "=" searchvalue / opt-globalcnst

opt-globalcnst = "authenticate" "=" auth-method / "language" "="
language / "incharset" "=" charsetset /
"outcharset" "=" charsetset / "ignore" "="
attriblist / "include" "=" attriblist

localcnstrnts = 0*("; localcnstrnt)

localcnstrnt = "case" "=" casevalue / "search" "=" searchvalue

format = "full" / "abridged" / "handle" / "summary" /
"server-to-ask"

auth-method = bytestring

language = <The language code defined in RFC1766 [ALVE95]>

charsetset = "us-ascii" / "iso-8859-1" / "iso-8859-2" / "iso-
8859-3" / "iso-8859-4" / "iso-8859-5" / "iso-
8859-6" / "iso-8859-7" / "iso-8859-8" / "iso-
8859-9" / "iso-8859-10" / "UNICODE-1-1-UTF-8" /
"UNICODE-2-0-UTF-8" "UTF-8"

; "UTF-8" is as defined in [RFC2279]. This is
; the character set label that should be used
; for UTF encoded information; the labels
; "UNICODE-2-0-UTF-8" and "UNICODE-1-1-UTF-8"
; are retained primarily for compatibility with
; older Whois++ servers (and as outlined in
; [RFC2279]).

searchvalue = "exact" / "substring" / "regex" / "fuzzy" /
"lstring"

casevalue = "ignore" / "consider"

bytestring = 0*charbyte

attributename = 1*attrbyte

attriblist = attributename 0*(", attributename)

charbyte = "\" specialbyte / normalbyte

normalbyte = <%d33-255, except specialbyte>

```

```

attrbyte      = <%d33-127 except specialbyte> /
                "\" <specialbyte except
                ":" " " tab nl>

specialbyte   = " " / tab / "=" / "," / ":" / ";" / "\" /
                "*" / "." / "(" / ")" /
                "[" / "]" / "^" /
                "$" / "!" / "?"

tab           = %d09
sp           = %d32      ; space

digit        = "0" / "1" / "2" / "3" / "4" /
                "5" / "6" / "7" / "8" /
                "9"

nl           = %d13 %d10  ; CR LF

```

NOTE: Blanks that are significant to a query must be escaped. The following characters, when significant to the query, may be preceded and/or followed by a single blank:

: ; , ( ) = !

### 3. Security Considerations

Security issues are discussed in section 1.

### 4. References

- [ALVE95] Alvestrand H., "Tags for the Identification of Languages", RFC 1766, March 1995.
- [RFC2234] Crocker, D. and P. Overell, "Augmented BNF for Syntax Specifications: ABNF", RFC 2234, November 1997.
- [RFC2958] Daigle, L. and P. Faltstrom, "The application/whoispp-response Content-type", RFC 2958, October 2000.
- [RFC1835] Deutsch, P., Schoultz, R., Faltstrom, P. and C. Weider, "Architecture of the WHOIS++ service", RFC 1835, August 1995.
- [RFC2046] Freed, N. and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types", RFC 2046, November 1996.

- [HARR85] Harrenstein K., Stahl M. and E. Feinler, "NICNAME/WHOIS", RFC 954, October 1985.
- [POST82] Postel J., "Simple Mail Transfer Protocol", STD 10, RFC 821, August 1982.
- [IIIR] Weider C. and P. Deutsch, "A Vision of an Integrated Internet Information Service", RFC 1727, December 1994.
- [WINDX] Weider, C., Fullton, J. and S. Spero, "Architecture of the Whois++ Index Service", RFC 1913, February 1996.
- [RFC2279] Yergeau F., " UTF-8, a transformation format of ISO 10646", RFC 2279, January 1998.

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