BBS Hierarchical Addressing Protocol

Authors:
      Dave Wolf, WO5H
      Roy Engehausen, AA4RE
      Hank Oredson, W0RLI
      Greg Jones, WD5IVD

Date:
    August 30th, 1994

Adopted by TAPR:
    March 3rd, 1995

Send Updates to Attached Tables to:
      Dave Wolf, WO5H
      Packet: wo5h@wo5h.#dfw.tx.usa.noam
      Internet: wo5h@tapr.org
      Fax: (817) 295-6232

Introduction
    The TAPR BBS Special Interest Group recommends the adoption of the x.3.4
hierarchical address protocol.

    After discussion of previous articles on hierarchical addressing
standards (1,2) and taking into account international issues of
regional/state name sizes, the TAPR BBS Special Interest Group recommends
the adoption of the x.3.4 standard on an international basis. x is defined
as 2, 3, or 4 letter region names as defined by the country.

    Examples of x.3.4:
      @WA6GVD.CA.USA.NOAM
      @EA2CMO.EAZ.ESP.EURO
      @F5JGK.FAQI.FRA.EURO

    Regional identifiers may be duplicated in different countries (i.e. AK,
Alaska, USA, could be used in another country as a regional identifier);
however, Country and Continental identifiers SHOULD NOT be used as regional
names.

    It is important to note that there is a distinct and significant
difference between HIERARCHICAL ADDRESSES and FLOOD DESIGNATORS.
Hierarchical address elements are common to all messages (bulletins, P and T
types) and are the foundation of the digital forwarding system. Flood
designators are used for routing and filtering bulletins. Geographical
flood designators are likely based upon hierarchical address elements. It
is therefore important that any attempt to establish standards concentrate
first on hierarchical address elements. Standards for flood designators can
follow.

    It is the purpose of this document to generate a changing recommendation
that reflects current hierarchical routing. Reference Tables at the end
will be changed as necessary to reflect current configurations within the
international BBS network. These tables will need to be changed and updated
in order to meet future needs of user and sysops.

Hierarchical Routing Syntax Summary
This summary uses a modified Backus-Naur form to summarize the syntax for
hierarchical addressing. [] = optional

    @hierarchial_address
      bbs.[#octothorpe.][region.]country.continent

```
    bbs
        valid callsign as defined by local communications authority


    #octothorpe.
        #area.[#octothorpe.]


            #area
                area as defined by the local region

                See Table 4 for list of current area identifiers


    region
        2,3, or 4 character region identifier as defined by the country.

            See Table 3 for list of region identifiers


    country
        3 character country identifier as defined by ANSI X.12 and EDIFACT.
        Published in ISO 3166-1981(E/F).

            See Table 2 for country identifiers


    continent
        4 character continental identifier.

            See Table 1 for continental identifiers.



------

Examples:
    F6CNB.#SETX.TX.USA.NOAM
    KB7WE.#WWA.WA.USA.NOAM
    OH6RBV.#VAA.FIN.EURO
    SK2AT.AC.SWE.EURO
    OH6RBG.FIN.EURO
    KE7KD.#NONEV.NV.USA.NOAM
    WX3K.#NOCAL.CA.USA.NOAM



------

References:

1. Jenkins, Lew (N6VV), Dave Toth (VE3GYQ), and Hank Oredson (W0RLI).
International Routing Designators.  Proceedings of the ARRL 7th Computer
Networking Conference.  Columbia Maryland.  October 1, 1988.  pp. 91-93.

2. Clark, Tom (W3IWI).  Some comments on the `H`ierarchical Continent
Address Designator.  Proceedings of the ARRL 9th Computer Networking
Conference.  London, Ontario Canada.  September 22, 1990.  pp. 278-279.


------

TABLE 1: Continent Identifiers

    EURO -- Europe
    MEDR -- Mediterranean
    INDI -- Indian Ocean including the Indian subcontinent
    MDLE -- Middle East
    SEAS -- South-East Asia
    ASIA -- The Orient

    NOAM -- North America (Canada, USA, Mexico)
    CEAM -- Central America
```

```
    CARB -- Caribbean
    SOAM -- South America

    AUNZ -- Australia/New Zealand
    EPAC -- Eastern Pacific
    NPAC -- Northern Pacific
    SPAC -- Southern Pacific
    WPAC -- Western Pacific

    NAFR -- Northern Africa
    CAFR -- Central Africa
    SAFR -- Southern Africa

    ANTR -- Antarctica

------

TABLE 2: Country Identifiers

    ARG -- Argentina
    AUS -- Australia
    AUT -- Austria
    BEL -- Belgium
    BMU -- Bermuda
    BOL -- Bolivia
    BRA -- Brazil
    BRN -- Brunei
    BGR -- Bulgaria
    CAN -- Canada
    CHL -- Chile
    CHN -- China
    COL -- Colombia
    CRI -- Costa Rica
    CUB -- Cuba
    DNK -- Denmark
    DOM -- Dominican Republic
    ECU -- Ecuador
    EGY -- Egypt
    SLV -- El Salvador
    FIN -- Finland
    FRA -- France
    PYF -- French Polynesia
    DEU -- Germany
    GRC -- Greece
    GRL -- Greenland
    GTM -- Guatemala
    HTI -- Haiti
    HND -- Honduras
    HKG -- Hong Kong
    HUN -- Hungary
    ISL -- Iceland
    IND -- India
    IDN -- Indonesia
    IRL -- Ireland
    ISR -- Israel
    ITA -- Italy
    JPN -- Japan
    PRK -- Korea, North
    KOR -- Korea, South
    LBN -- Lebanon
    LIE -- Liechtenstein
    LUX -- Luxembourg
    MYS -- Malaysia
    MEX -- Mexico
    MCO -- Monaco
    MAR -- Morocco
```

```
NLD -- Netherlands
NZL -- New Zealand
NIC -- Nicaragua
NOR -- Norway
PAK -- Pakistan
PAN -- Panama
PRY -- Paraguay
PER -- Peru
PHL -- Phillipines
POL -- Poland
PRT -- Portugal
ROM -- Romania
SAU -- Saudi Arabia
SGP -- Singapore
ZAF -- South Africa
ESP -- Spain
SWE -- Sweden
CHE -- Switzerland
SYR -- Syria
TWN -- Taiwan
THA -- Thailand
TUR -- Turkey
GBR -- United Kingdom
USA -- United States
URY -- Uruguay
SUN -- USSR  ??? (Document needs latest defintions)
VEN -- Venezuela
YUG -- Yugoslavia


------

TABLE 3: Region Identifiers organized by Country Codes.

    ARG -- Argentina
       BA  -- ??
       CF  -- ??
    AUS -- Australia
       ??
    AUT -- Austria
       ??
    BEL -- Belgium
       HT  -- ??
       LG  -- ??
       OVN -- ??
       WVL -- ??
    BMU -- Bermuda
       ??
    BOL -- Bolivia
       ??
    BRA -- Brazil
       RS  -- ??
       SP  -- ??
    BRN -- Brunei
       ??
    BGR -- Bulgaria
       ??
    CAN -- Canada
       NF  -- Newfoundland
       AB  -- Alberta
       BC  -- British Columbia
       MB  -- Manitoba
       NB  -- New Brunswick
       NS  -- Nova Scotia
       NW  -- Northwest Territories
       ON  -- Ontario
       PQ  -- Province du Quebec
```

```
    SK  -- Saskatchewan
    YK  -- Yukon
CHL -- Chile
    ??
CHN -- China
    ??
COL -- Colombia
    ??
CRI -- Costa Rica
    ??
CUB -- Cuba
    ??
DNK -- Denmark
    ??
DOM -- Dominican Republic
    ??
ECU -- Ecuador
    ??
EGY -- Egypt
    ??
SLV -- El Salvador
    ??
FIN -- Finland
    ??
FRA -- France
    FCEN -- ??
    FRPA -- ??
    FCAL -- ??
    FPDL -- ??
    FMLR -- ??
    FNOR -- ??
    FCOR -- ??
    FPOC -- ??
    FAQI -- ??
PYF -- French Polynesia
    ??
DEU -- Germany
    BY  -- ??
GRC -- Greece
    ??
GRL -- Greenland
    ??
GTM -- Guatemala
    none
HTI -- Haiti
    ??
HND -- Honduras
    ??
HKG -- Hong Kong
    ??
HUN -- Hungary
    ??
ISL -- Iceland
    ??
IND -- India
    ??
IDN -- Indonesia
    ??
IRL -- Ireland
    ??
ISR -- Israel
    ??
ITA -- Italy
    IEMR -- ??
    IFVG -- ??
    ILOM -- ??
```

```
        IPIE -- ??
        IPUG -- ??
        ISAR -- ??
        ISIC -- ??
        ITAA -- ??
        IVEN -- ??
        MO   -- ??
JPN -- Japan
        ??
PRK -- Korea, North
        ??
KOR -- Korea, South
        ??
LBN -- Lebanon
        ??
LIE -- Liechtenstein
        ??
LUX -- Luxembourg
        ??
MYS -- Malaysia
        ??
MEX -- Mexico
        ??
MCO -- Monaco
        ??
MAR -- Morocco
        ??
NLD -- Netherlands
        ??
NZL -- New Zealand
        ??
NIC -- Nicaragua
        ??
NOR -- Norway
        ??
PAK -- Pakistan
        ??
PAN -- Panama
        ??
PRY -- Paraguay
        ??
PER -- Peru
        ??
PHL -- Phillipines
        ??
POL -- Poland
        ??
PRT -- Portugal
        CTPT -- ??
ROM -- Romania
        ??
SAU -- Saudi Arabia
        ??
SGP -- Singapore
        ??
ZAF -- South Africa
        ??
ESP -- Spain
        EAA  -- Alicante
        EAAB -- Albacete
        EAAL -- Almeria
        EAAV -- Avila
        EAB  -- Barcelona
        EABA -- Badajoz
        EABI -- Vizcaya (Bilbao)
        EABU -- Burgos
```

```
    EAC  -- Coruna
    EACA -- Cadiz
    EACC -- Caceres
    EACE -- Ceuta
    EACO -- Cordoba
    EACR -- Ciudad Real
    EACS -- Castellon
    EACU -- Cuenca
    EAGC -- Gran Canaria
    EAGI -- Gerona
    EAGR -- Granada
    EAGU -- Guadalajara
    EAH  -- Huelva
    EAHU -- Huesca
    EAJ  -- Jaen
    EAL  -- Lerida
    EALE -- Leon
    EALO -- Logrono
    EALU -- Lugo
    EAM  -- Madrid
    EAMA -- Malaga
    EAML -- Melilla
    EAMU -- Murcia
    EANA -- Navarra (Pamplona)
    EAO  -- Oviedo
    EAOR -- Orense
    EAP  -- Palencia
    EAPM -- Baleares (Palma de Mallorca)
    EAPO -- Pontevedra
    EAS  -- Santander
    EASA -- Salamanca
    EASE -- Sevilla
    EASG -- Segovia
    EASO -- Soria
    EASS -- Guipuzcoa (San Sebastian)
    EAT  -- Tarragona
    EATE -- Teruel
    EATF -- Tenerife
    EATO -- Toledo
    EAV  -- Valencia
    EAVA -- Valladolid
    EAVI -- Alava (Vitoria)
    EAZ  -- Zaragoza
    EAZA -- Zamora
SWE -- Sweden
    AC  -- ??
CHE -- Switzerland
    ??
SYR -- Syria
    ??
TWN -- Taiwan
    ??
THA -- Thailand
    ??
TUR -- Turkey
    ??
GBR -- United Kingdom  (need a list of routing numbers by county)
    #1   -- ??
    #2   -- ??
    # ...-- ??
USA -- United States
    AK  -- Alaska
    AL  -- Alabama
    AR  -- Arkansas

    AZ  -- Arizona
```

```
        CA  -- California
        CO  -- Colorado
        CT  -- Connecticut
        DE  -- Delaware
        FL  -- Florida
        GA  -- Georgia
        HI  -- Hawaii
        IA  -- Iowa
        ID  -- Idaho
        IL  -- Illinois
        IN  -- Indiana
        KS  -- Kansas
        KY  -- Kentucky
        LA  -- Louisiana
        MA  -- Massachusetts
        MD  -- Maryland
        ME  -- Maine
        MI  -- Michigan
        MI  -- Mississippi
        MN  -- Minnesota
        MO  -- Missouri
        MT  -- Montana
        NC  -- North Carolina
        ND  -- North Dakota
        NE  -- Nebraska
        NH  -- New Hampshire
        NJ  -- New Jersey
        NM  -- New Mexico
        NV  -- Nevada
        NY  -- New York
        OH  -- Ohio
        OK  -- Oklahoma
        OR  -- Oregon
        PA  -- Pennsylvania
        RI  -- Rhode Island
        SC  -- South Carolina
        SD  -- South Dakota
        TN  -- Tennessee
        TX  -- Texas
        UT  -- Utah
        VA  -- Virginia
        VT  -- Vermont
        WA  -- Washington
        WI  -- Wisconsin
        WV  -- West Virginia
        WY  -- Wyoming
    URY -- Uruguay
        MVD  -- ??
    SUN -- USSR  ??? (Document needs latest defintions)
        ??
    VEN -- Venezuela

    YUG -- Yugoslavia
        SRB -- ??


------


Table 4: Area Defintions

    This table to be defined during the comment period.

    All readers are suggested to submit their regional area defintions for
    inclusion in the table.  Be sure to include the region and country.
    Example:  #DFW.TX.USA  -- Dallas/Ft Worth Texas Area
        would be an entry in this table.
```