Generalized MANET Packet/Message Format

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Status

- draft-ietf-manet-packetbb-00.txt (replaces draft-clausen-manet-olsrv2fmt-00.txt)
- intended format for carrying MANET wg protocol control signals
  - generalized
  - extensible
  - flexible
  - syntax-only
Basic Morphology

Packet

Message

address

attribute(s)

address

attribute(s)

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Message Morphology

Message

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Address Blocks

Address Block

```
<address-block> = <head-length>      
                   <head>        
                   <num-tails> 
                   <tail>+      
```

Legend:
+  “one or more occurrences of previous element”
Attributes - TLVs

TLV

<tlv> = <type>
<tlv-semantics>
<length>?
<index-start>?
<index-stop>?
<value>?

Legend:
? “zero or one occurrences of previous element”
Attributes - TLVs

- novalue
- extended
- noindex
- multivalue

Legend:
? “zero or one occurrences of previous element”
Attributes - TLVs

TLV Block

<tlv-block> = <tlv-length>
<tlv>*

Legend:
* “zero or more occurrences of previous element”
Messages: Address Blocks + TLVs

<message> = <msg-header> <tlv-block> {<addr-block> <tlv-block>}*  

Legend:
* “zero or more occurrences of previous element”
The Message Header

\[ \text{<msg-header> = <type>}
\]
\[ \text{<msg-semantics>}
\]
\[ \text{<msg-size>}
\]
\[ \text{<msg-header-info>}
\]

- \text{<msg-header-info>}
  
  - duplicate detection
  
  - controlled-scope
Packet Format Features

- Packets: hop-by-hop
- Messages: can be forwarded:
  - header-processing only
  - permits protocol-independent implementation
- Flexible:
  - OLSRv2, DYMO, SMF
  - general and specific extensions