

# Generalized MANET Packet/Message Format

Thomas Clausen <[Thomas.Clausen@polytechnique.fr](mailto:Thomas.Clausen@polytechnique.fr)>

Chris Dearlove <[Chris.Dearlove@baesystems.com](mailto:Chris.Dearlove@baesystems.com)>

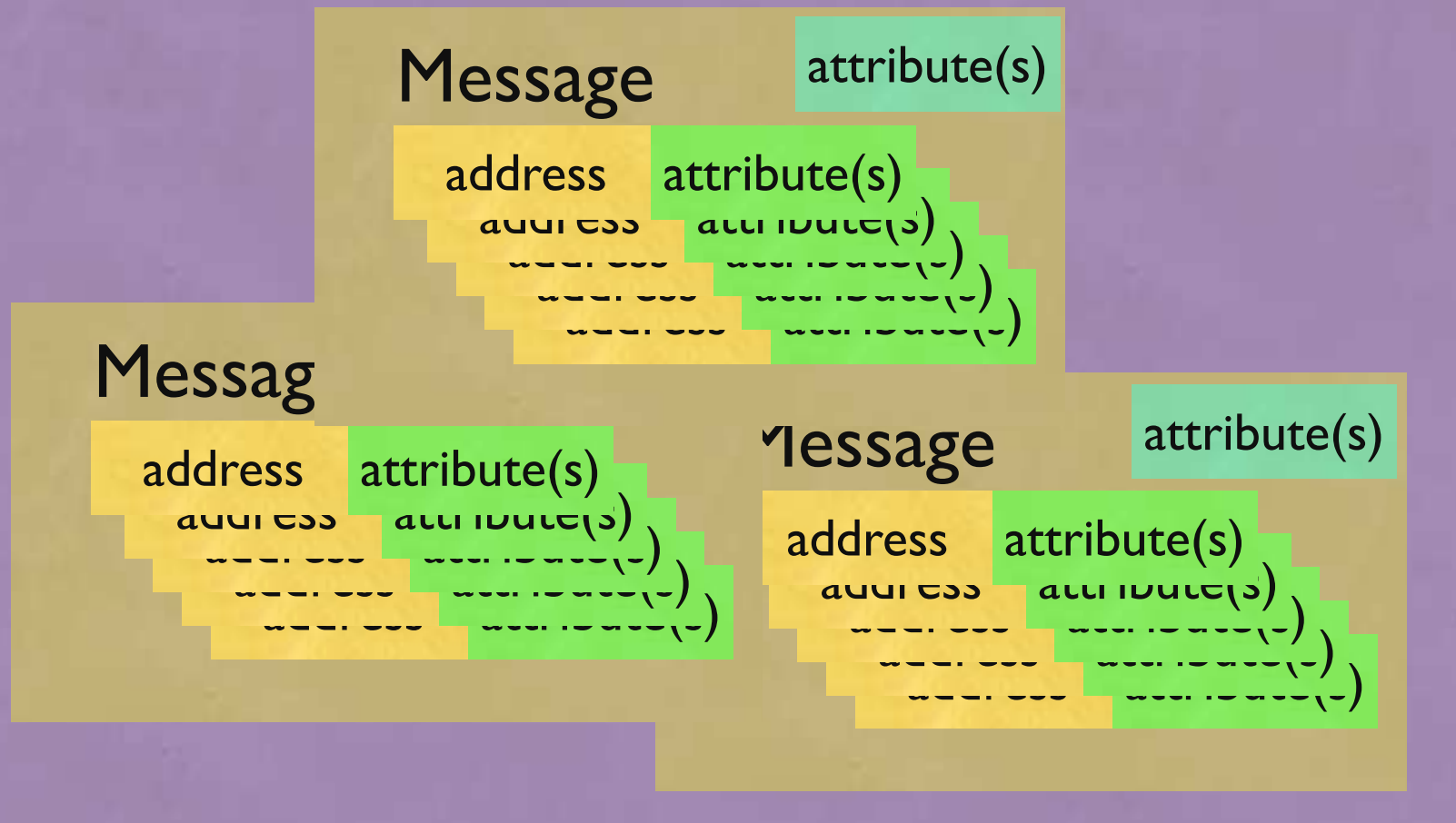
Justin Dean <[jdean@itd.nrl.navy.mil](mailto:jdean@itd.nrl.navy.mil)>

# Status

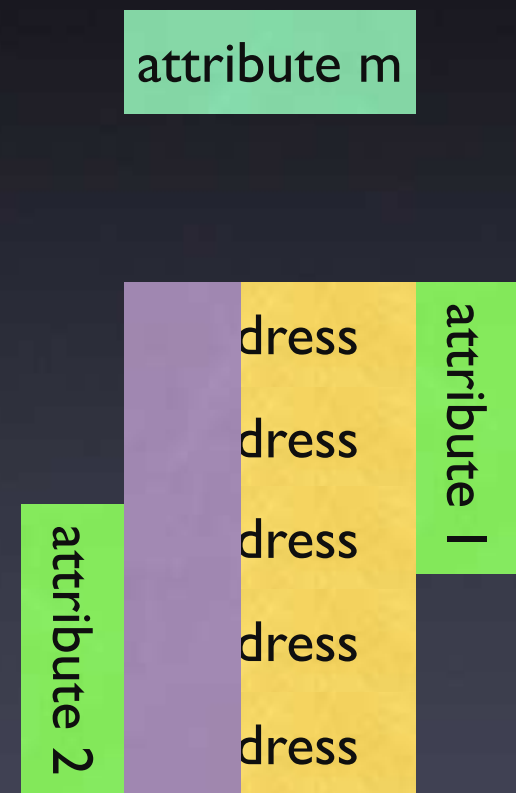
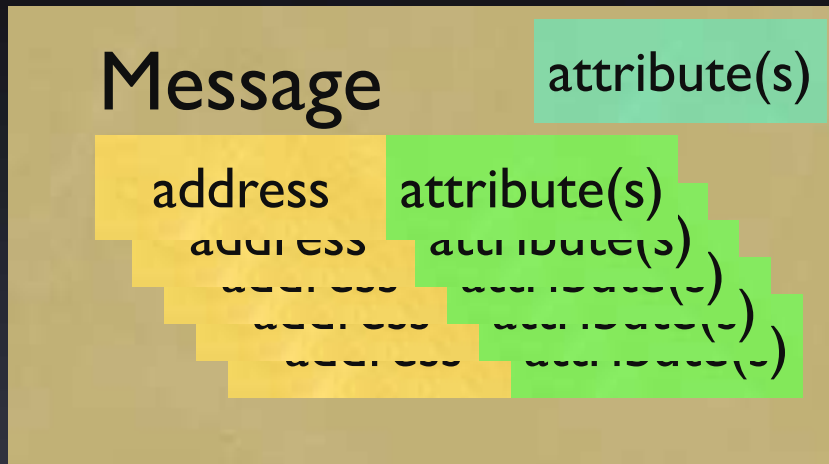
- `draft-ietf-manet-packetbb-00.txt`  
(replaces `draft-clausen-manet-olsrv2fmt-00.txt`)
- intended format for carrying MANET wg  
protocol control signals
  - generalized
  - extensible
  - flexible
  - syntax-only

# Basic Morphology

Packet

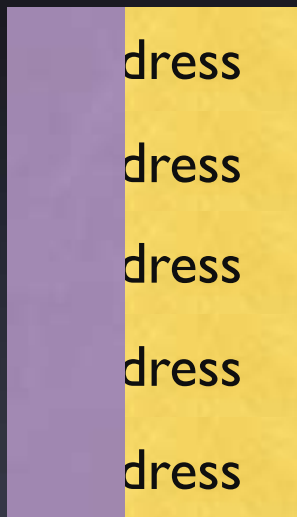


# Message Morphology



# Address Blocks

## Address Block



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

### Legend:

+ “one or more occurrences  
of previous element”

# Attributes - TLVs

attribute m

TLV

attribute l



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

Legend:

? “zero or one occurrences of previous element”

# Attributes - TLVs

- novalue
- extended
- noindex
- multivalued

`<tlv> = <type>`

`<tlv-semantics>`

`<length>?`

`<index-start>?`

`<index-stop>?`

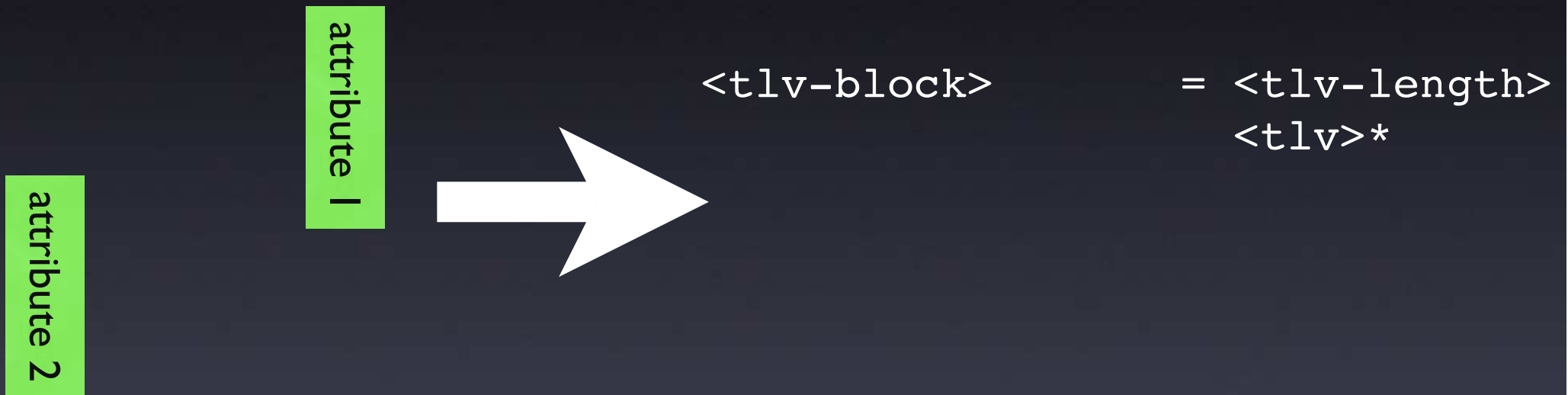
`<value>?`

Legend:

? “zero or one occurrences of previous element”

# Attributes - TLVs

TLV Block

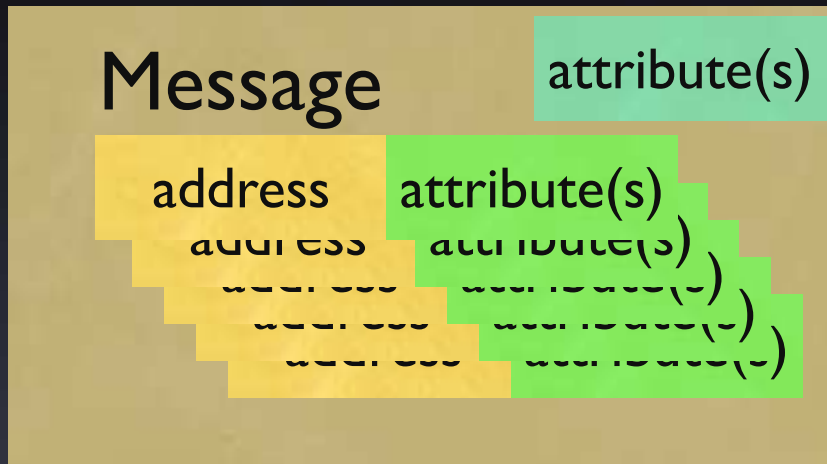


Legend:

\* “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

`<msg-header> = <type>`  
`<msg-semantic>`  
`<msg-size>`  
`<msg-header-info>`



- `<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