

802.3as Frame Expansion

Changes to Clauses 2,3 & 4

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802.3as editor

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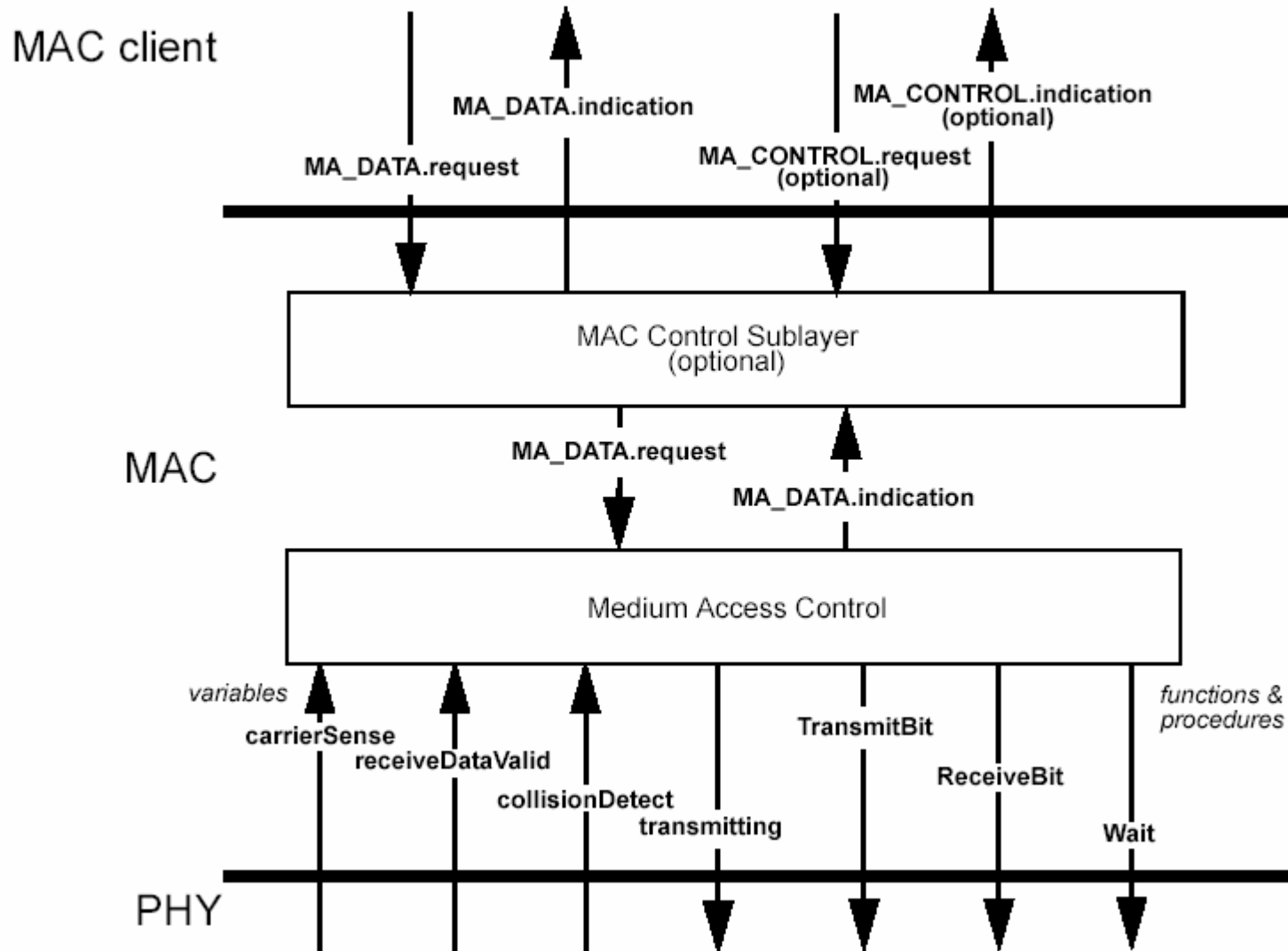
Agenda

- **Interface alignment**
- **Waterloo at Sacramento**
- **Frame format**
- **Frame size**
- **Constants & Types**
- **Sample frame**

Service to humanity

- Realign MAC client service primitives
 - MA_DATA.request and MA_DATA.indication
 - MAC client --MAC Control Sublayer – MAC
 - Delete TransmitFrame, ReceiveFrame
- Figure rework
 - Fig 2-1
 - Fig 31-2, 31-4, 31B-1

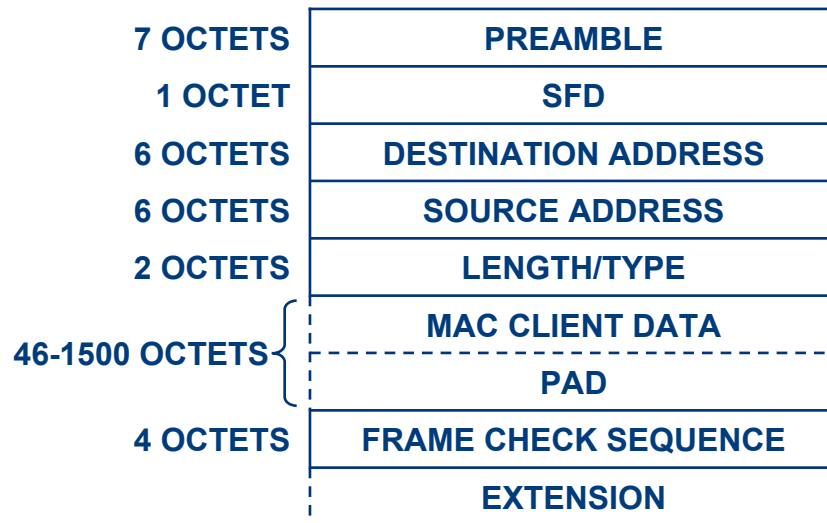
MAC service primitives



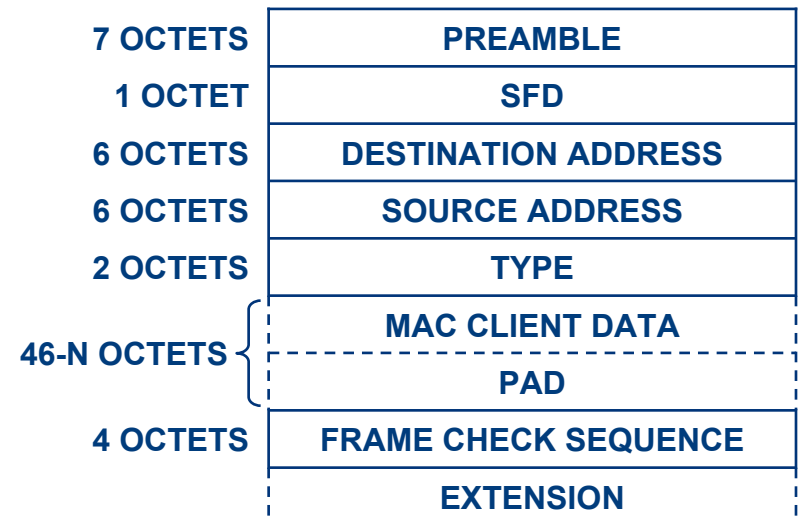
.1/.3 joint meeting – Jan 2005

- **802.3 proposes envelope frame**
 - **Prefix and suffix around original data**
- **802.1 disagrees and prevails**
 - **No prefix or suffix**
 - **No constructs to ‘artificially’ bound the original frame contents**
 - **Only note a bigger size**
 - **Use an enumerated list**
 - **2000 is a non-offensive number**

Frame format



IEEE 802.3-2002/Figure 3-1
Basic MAC frame format



IEEE 802.3as/Figure 3-1
MAC frame format

Remove clause 3.5 – Tagged Frame

Frame sizes

Frame Sizes	802.3-2002	802.3as
Minimum basic untagged MAC frame size	64 octets	64 octets
Maximum basic untagged MAC frame size	1518 octets	1518 octets
Minimum Tagged MAC frame size	64 octets	64 octets
Maximum Tagged MAC frame size	1522 octets	1522 octets
Minimum Envelope MAC frame size	N/A	N octets
Maximum Envelope MAC frame size	N/A	N octets

Value of N	Envelope frame
1500 octets	Basic frame
1504 octets	QTagged frame
1982 octets	Envelope frame



Allowable implementations -

Clause 4.4.2

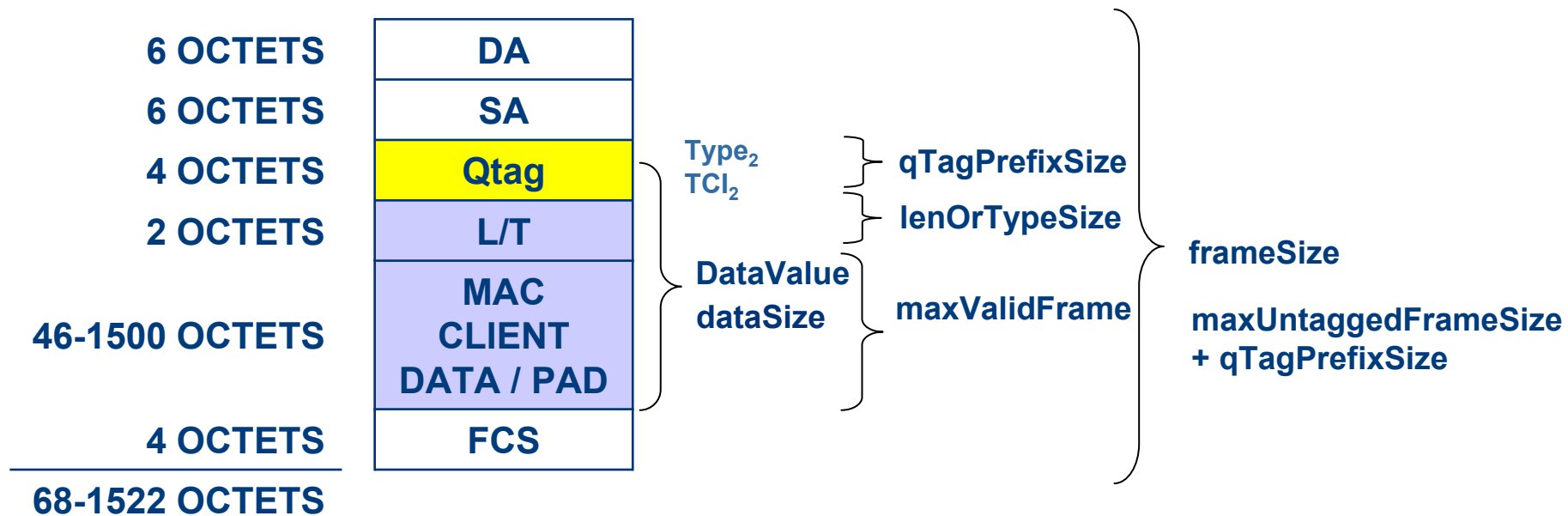
Parameters	10M, 100M	1G	10G
slotTime			
interFrameGap	No change		
attemptLimit			
backoffLimit			
jamSize			
maxUntaggedFrameSize maxBasicFrameSize	1518 octets	1518 octets	1518 octets
maxEnvelopeFrameSize	2000 octets	2000 octets	2000 octets
minFrameSize	64 octets	64 octets	64 octets
burstLimit	No change		
ifsStretchRatio			

Clause 4.2.7.1 - constants

Current	802.3as
$\text{frameSize} = \text{address} + \text{L/T} + \text{data} + \text{CRC}$	No change
$\text{minFrameSize} = 64 \text{ octets}$	No change
$\text{maxUntaggedFrameSize} = 1518 \text{ octets}$	$\text{maxBasicFrameSize} = 1518 \text{ octets}$ $\text{maxEnvelopeFrameSize} = 2000 \text{ octets}$
$\text{qTagPrefixSize} = 4 \text{ octets}$	No change (grandfathered)
$\text{maxValidFrame} =$ $\text{maxUntaggedFrameSize} - (2 \times$ $\text{addressSize} + \text{lengthOrTypeSize} +$ $\text{crcSize}) / 8$	$\text{maxValidFrame} =$ $\text{maxEnvelopeFrameSize} - (2 \times$ $\text{addressSize} + \text{lengthOrTypeSize} +$ $\text{crcSize}) / 8$
DataValue = includes VLAN tag	DataValue = includes envelope

Constants - 802.3-2002

802.1Q Tagged Frame



Constants - 802.3as

