IF MIB

RFC 2863
DRAFT STANDARD

REPLACES IF GROUP OF MIB-II
- RFC 1213
- RFC1229 (EXTENSIONS TO THE IF GROUP)

DEFINES THE FOLLOWING MAIN TABLES:
- ifStackTable
- ifTable
- ifXTable
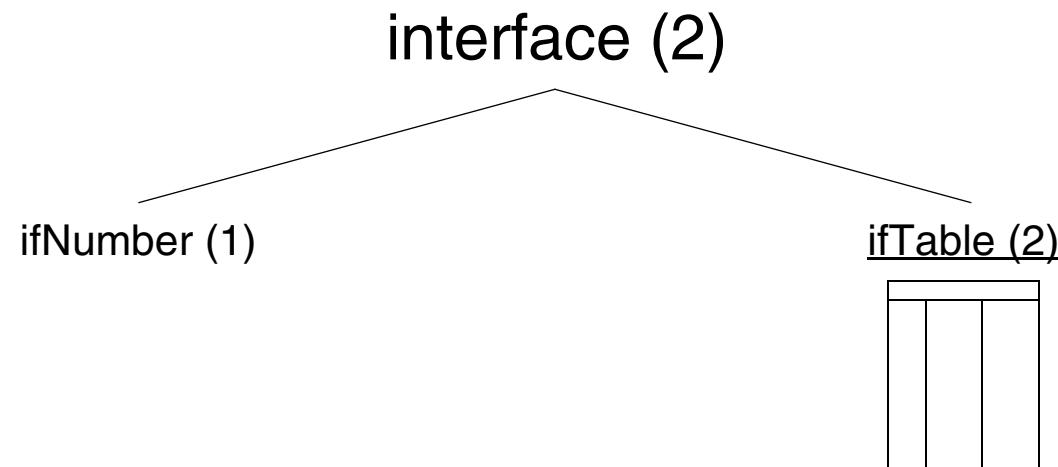
SEE ALSO: INVERTED STACK TABLE
RFC 2864
DRAFT STANDARD

IF GROUP OF MIB-II

- PROVIDES DETAILED INFORMATION OF "GENERALIZED" INTERFACES

- CONTAINS POINTERS TO MEDIA SPECIFIC MIBS

- INTERFACES CAN BE PHYSICAL OR VIRTUAL

- DEFINES 1 COUNTER AND 1 TABLE

interface (2)

ifNumber (1)   ifTable (2)

ifTable OF MIB-II

| ifIndex	ifDescr	ifType	ifMtu	ifSpeed	ifPhysAddress	**ifAdminStatus**	ifOperstatus	ifLastChange	ifInOctets	ifInUcastPkts	ifInNUcastPkts	ifInDiscards	ifInErrors	ifInUnknownProtos	ifOutOctets	ifOutUcastPkts	ifOutNUcastPkts	ifOutDiscards	ifOutErrors	ifOutQLen	ifSpecific
1																					●→
2																					●→
n																					●→

ifType and ifStatus

• ifType
EXAMPLES:

1	Undefined	16	LAPB
6	Ethernet	20	ISDN Basic
7	IEEE 802.3	21	ISDN Primary
8	IEEE 802.4	23	PPP
9	IEEE 802.5	24	Loopback
10	IEEE 802.6	28	SLIP
15	FDDI	32	Frame Relay
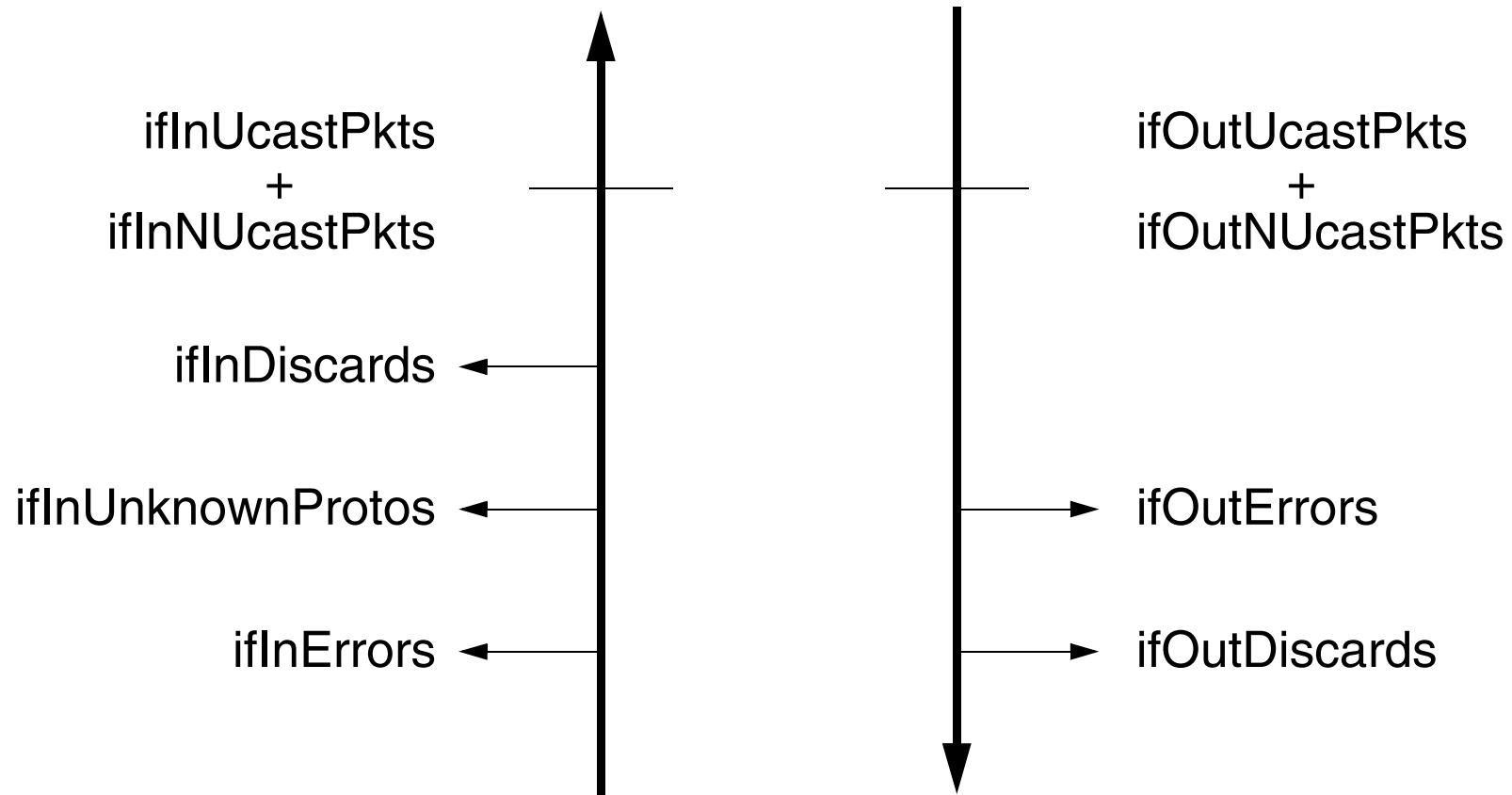
• ifAdminStatus / ifOperStatus
1 = up
2 = down
3 = testing

IF PACKET COUNT

ifInUcastPkts
+
ifInNUcastPkts

ifInDiscards

ifInUnknownProtos

ifInErrors

ifOutUcastPkts
+
ifOutNUcastPkts

ifOutErrors

ifOutDiscards

PROBLEMS WITH ifTable OF MIB-II

LAYERED INTERFACES DIFFICULT TO DESCRIBE
• WHAT SHOULD BE THE VALUE OF ifType?

NO DISTINCTION BETWEEN VIRTUAL & PHYSICAL INTERFACES

NO SUPPORT FOR DYNAMIC ADDITION/REMOVAL OF INTERFACES

COUNTERS ARE 32 BITS (SMIv1)
• WRAP AROUND 10 MBIT ETHERNET: 57 MINUTES
• WRAP AROUND 1 GBIT ETHERNET: LESS THAN 1 MINUTE!

GAUGES ARE 32 BITS
• ifSpeed
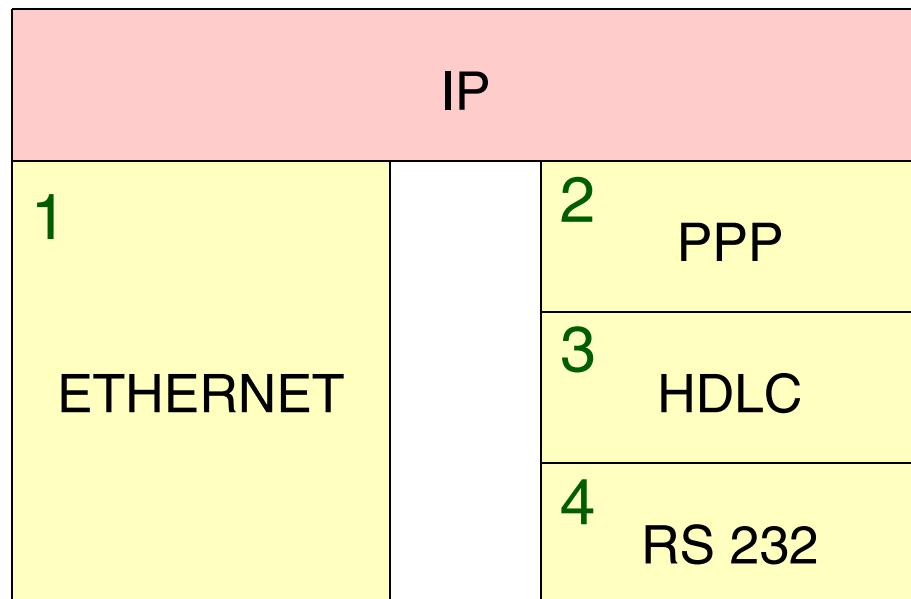
INTERFACE TYPES "HARD CODED" IN STANDARD

NO DIFFERENCE BETWEEN MULTICAST & BROADCAST

TOO MANY TRAPS

INTERFACE STACKS

LAYERING OF INTERFACES NOW DEFINED BY ifStackTable

CHANGES / ADDITIONS TO THE ifTable

NEW interfaceIndex TEXTUAL CONVENTION
- INTERFACE NUMBERING NEED NOT BE CONSEQUETIVE

NEW IANAifType
- INTERFACE TYPES CAN BE DEFINED EXTERNALLY

HIGH CAPACITY COUNTERS
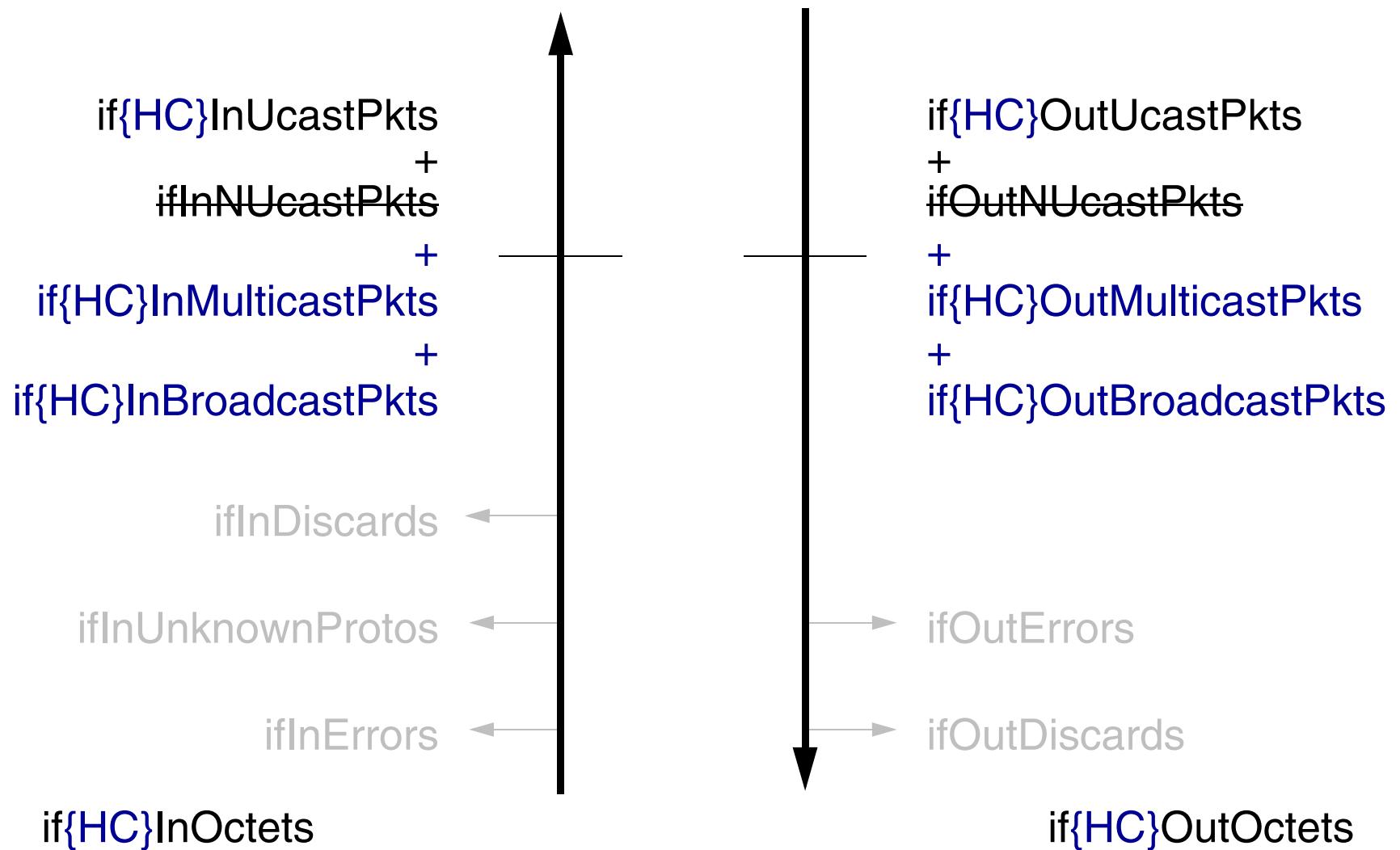
NEW ifHighSpeed OBJECT
- IN 1.000.000 BITS/S

SEVERAL OTHER NEW OBJECTS
- ifName
- ifAlias
- ifLinkUpDownTrapEnable
- ifConnectorPresent
- ifPromiscuousMode
- ifCounterDiscontinuityTime

ifXTable: HIGH CAPACITY COUNTERS

if{HC}InUcastPkts
+
~~ifInNUcastPkts~~
+
if{HC}InMulticastPkts
+
if{HC}InBroadcastPkts

if{HC}OutUcastPkts
+
~~ifOutNUcastPkts~~
+
if{HC}OutMulticastPkts
+
if{HC}OutBroadcastPkts

ifInDiscards

ifInUnknownProtos

ifOutErrors

ifInErrors

ifOutDiscards

if{HC}InOctets

if{HC}OutOctets

OTHER ADDITIONS

RECEIVE ADDRESS TABLE
• DEFINES THE ADDRESSES FOR WHICH EACH INTERFACE
WILL RECEIVE PACKETS / FRAMES

linkUp / linkDown NOTIFICATION TYPES

COMPLIANCE GROUPS

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