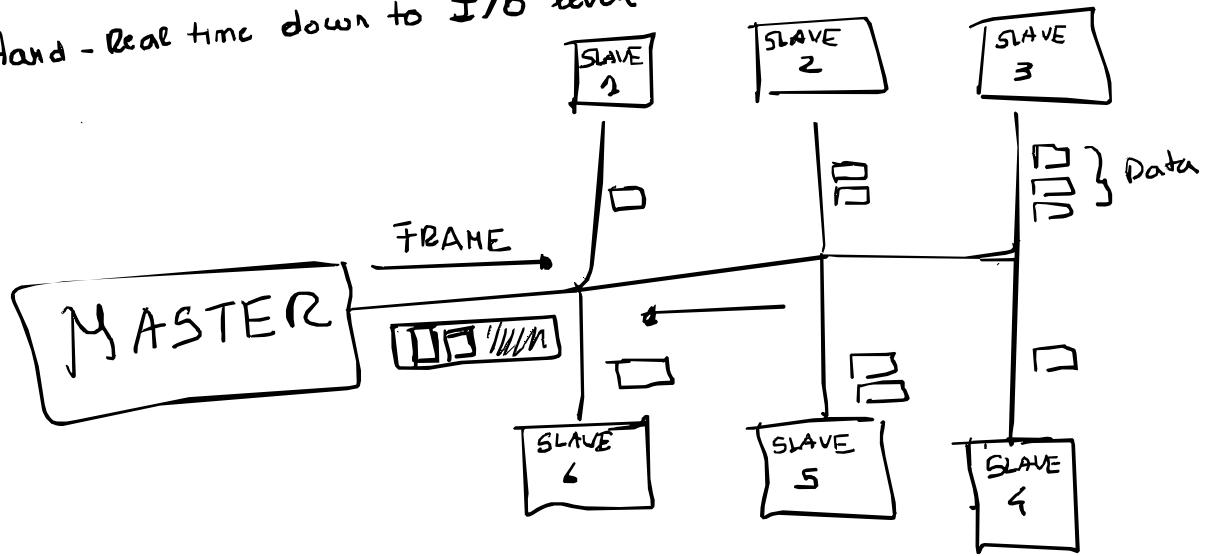


## EtherCAT

- Ethernet-based fieldbus system developed by Beckhoff
- With EtherCAT, the standard Ethernet packet or frame is no longer received, interpreted and copied as process data at every node
- EtherCAT slaves read the data addressed to them while the rest of the packet passes through the device
- Real time data and messages are prioritized over more general, less time-sensitive or heavy load data
- Similarly, input data is inserted while the telegram passes through. A frame is not completely received before being processed.
- The whole network can be addressed with just one frame
- Hard - Real time down to I/O level



- Typically 1 frame/cycle
- Drops Data as it passes each slave
- Uses Standard Ethernet Frames

DESTINATION	SOURCE	ETHER TYPE	HEADER	DATA	CRC
48 Bit	48 Bit	16 Bit	16 Bit	48 to 1498 Bytes	32 Bit

- Uses TCP/IP or UDP