

Ethernet LANs

Exercise 1: How many possible OUI's are there? How many devices can be manufactured for each OUI?

6 bytes $\left\{ \begin{array}{l} 3 \text{ OUI} \\ 3 \text{ device} \end{array} \right.$ $\xrightarrow{24 \text{ bits}}$ $2^{24} \approx 16 \text{ million}$
 16 million

Exercise 2: Classify each of a hub, learning bridge and switch according to the following: can operate in full-duplex mode, can have independent PHY rates, collisions can happen, can receive from multiple ports simultaneously.

	HUB	BRIDGE / SWITCH
full duplex	N	Y
independent PHY rates	N	Y
collisions	Y	N
can have multiple ports, receive	N	Y

