

Some Revision Questions on Nick's part of the course

- What does it mean to broadcast a packet or frame when using IP, Ethernet, ATM?
 - What address is used?
 - Who can/will receive the broadcast?
 - DNS and ARP both perform mapping operations. How do they rely on broadcast?
 - If a data-link protocol does not support broadcast, how does this change neighbour detection operations?
- Is multicast the same or different to broadcast? Explain the differences?
- What happens when a router fails?
- Can collisions happen on a wired ATM network?
 - What if the ATM network uses a wireless connection?

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Some More Revision Questions

- How does slotted Aloha avoid collisions?
- How does Bluetooth avoid collisions?
- How does Ethernet avoid collisions?
- How does WiFi (IEEE 802.11) avoid collisions?
- Considering both wired and wireless connections, what causes “jitter” on the Internet?
 - How can this jitter be either minimised or removed using:
 - IP mechanisms?
 - Data-link layer mechanisms?

In each case, what extra costs are imposed by jitter control mechanisms?

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Some More Revision Questions

- A media service wants reliable in-order data delivery but with minimal jitter and no end-to-end re-transmissions. Given complete control of the network stack, how might this be achieved?
 - List network features/behaviours required or desirable to achieve this.
 - Which protocols would you use? Why?
 - Which protocols would you avoid? Why?