Presentation #2 Speech

1. Speech(Adam)
    a. So what we have here is a Transport Stream. What's a transport stream? Well it's a collection of data that represents an audio/video file. This transport stream is made up of one or more program streams. A program stream is the coded data of either video or audio, or both. Our goal here is to extract these program streams.
    b. So this transport stream is broken into multiple 188 byte packets. (Cut the tape, put it on white board).
    c. Here we have a 188 byte packet. Every packet is divided into two parts, the meta data (first four bytes), and the payload. The packet can consist of just meta data and no payload, as we see here in this first packet. The meta data in this packet contains the Program Association Table (PAT), what does the Program Association Table do? Well I'll let Chris explain that (Handoff to Chris).
    d. Lets analyze our next packet (cut the tape, put it on the board). This packet here contains the Program Map Table (PMT). What's that you ask? (Handoff to Chris).
    e. Lets analyze our next packet (cut the tape and put it on the board). This packets contains the unit start flag, what does this flag mean? (handoff to chris).
    f. Analyze the next packet, it's a PES packet…next is also a PES packet and so on to about 4 PES packets.
    g. We keep appending these PES packets until we get to the next unit start flag of the same PID which indicates the end of the previous PES packet and the start of a new PES packet.
    h. We then keep collecting these PES packets until we reach a timestamp in the meta data. All these PES packets together make one sample of either audio or video. And by sample (or frame), I mean a very small amount of data, usually $1/30^{th}$ of a second. These samples will be used to construct the MP4.
    i. This is where we will stop and let Dave and Andrew tell you about the MP4.