2018 S2 DCNC A1 Q2

Group: Cheng Chen   s3728207

       Bowen Zhang s3617571

1.

Alice		Alice's Device		Proxy Sever		Gateway		PSTN		BOB's Device		BOB
• Analog	→	• Analog to Digital	→	• Digital	→	• Digital to Analog	→	• Analog	→	• Analog	→	• Analog

2.

Alice's Device: Translate Analog data (Alice's voice) to digital data and send it to server

Proxy Server: Look for resources from other servers

Gateway: Allows data to flow from one discrete network to another and translate the data if necessary. In this case, it translates digital data to analog data for PSTN network

PSTN: Transmit analog data through telephone wire

Bob's Device: Receive the analog data

3:

– Human sound

– Microphone

To improve quality: Use higher quality microphone to collect higher range of sound.

– Analog to Digital converter

To improve quality: Use higher bitrate to create digital signal that is closer to the original signal.

– Digital Processor

To improve quality: Do less extra process to avoid error creations

– Digital to Analog converter

To improve quality: Use a device that is capable of completely processing the data that is received.

– Sound received