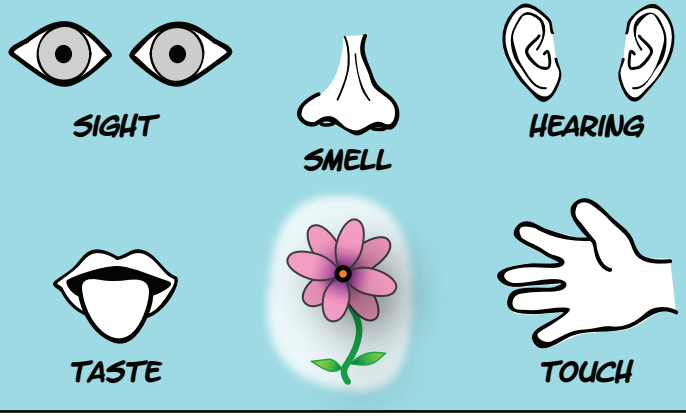
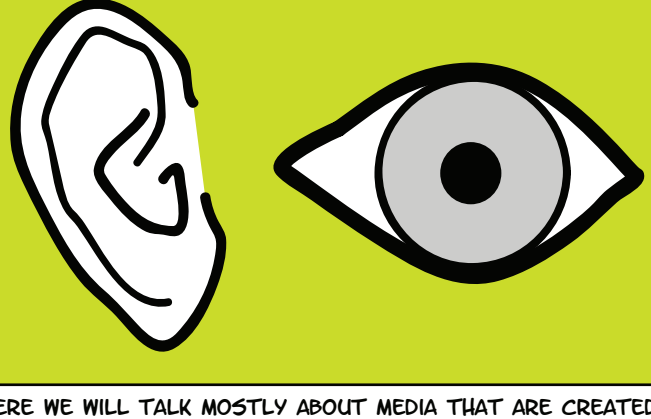
THE DIGITAL MEDIA LIFECYCLE

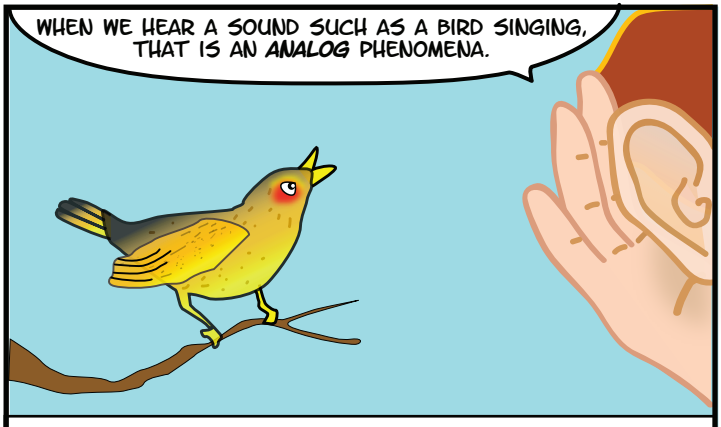
THE *DIGITAL MEDIA LIFECYCLE* ENCOMPASSES THE PROCESS OF TURNING THE WORLD AS OUR HUMAN SENSES PERCEIVE IT INTO DIGITAL DATA THAT CAN BE STORED, PROCESSED AND TRANSMITTED BACK TO US.



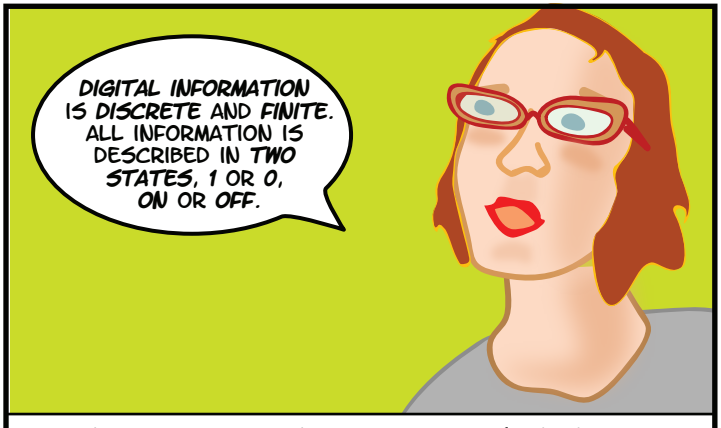
WE START THIS PROCESS WITH SOME KIND OF *STIMULUS* THAT IS PERCEIVED BY ONE OF OUR FIVE SENSES.



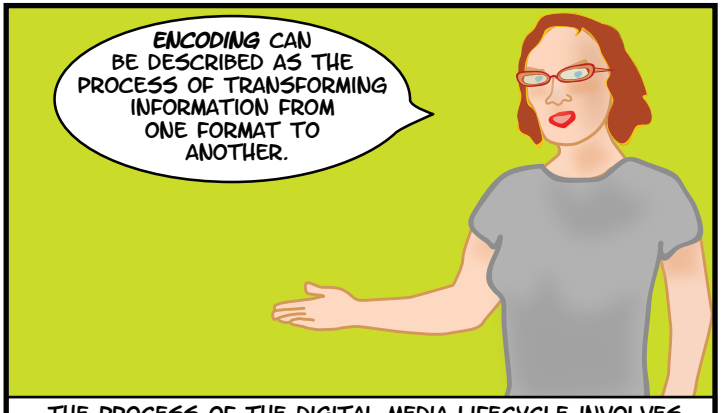
HERE WE WILL TALK MOSTLY ABOUT MEDIA THAT ARE CREATED FROM STIMULUS TO OUR EYES AND EARS, THOUGH THERE IS DIGITAL MEDIA THAT USES THE OTHER SENSES.



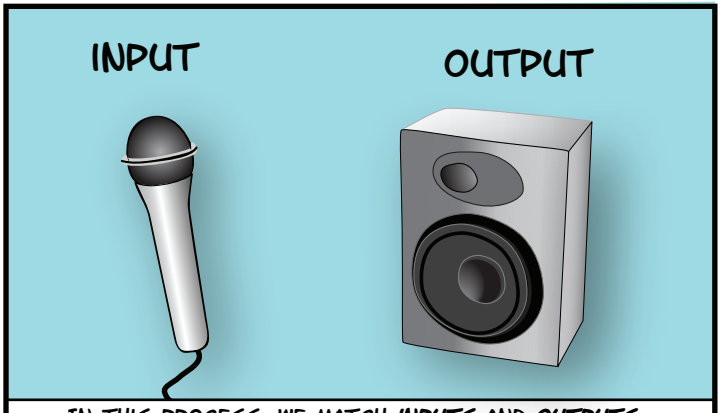
ANALOG INFORMATION IS CHARACTERIZED BY ITS ***CONTINUOUS*** NATURE. IT CAN HAVE AN ***INFINITE*** NUMBER OF POSSIBLE VALUES.



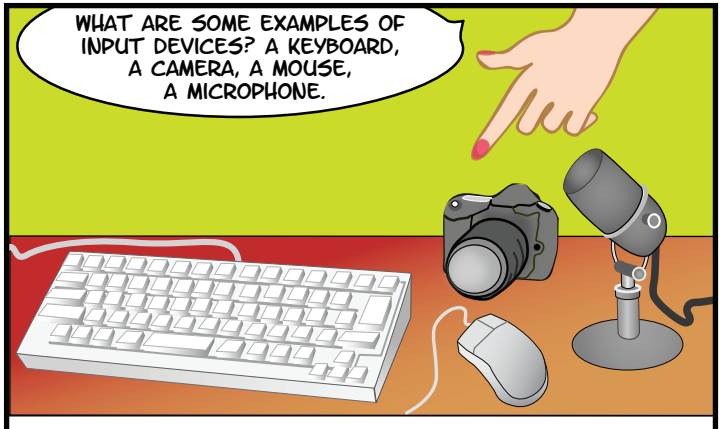
THE QUALITIES OF THE ANALOG WORLD (***CONTINUOUS*** AND ***INFINITE***) CONTRAST WITH HOW DIGITAL INFORMATION IS CHARACTERIZED.



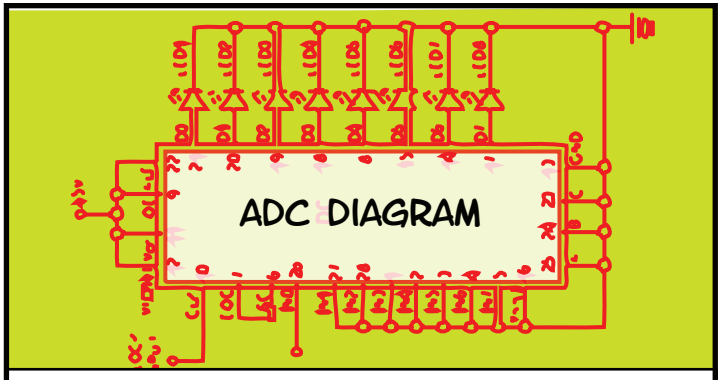
THE PROCESS OF THE DIGITAL MEDIA LIFECYCLE INVOLVES ENCODING ***ANALOG INFORMATION TO DIGITAL INFORMATION,*** THEN CONVERTING THAT INFORMATION BACK TO ANALOG SO OUR HUMAN SENSES CAN PERCEIVE IT.



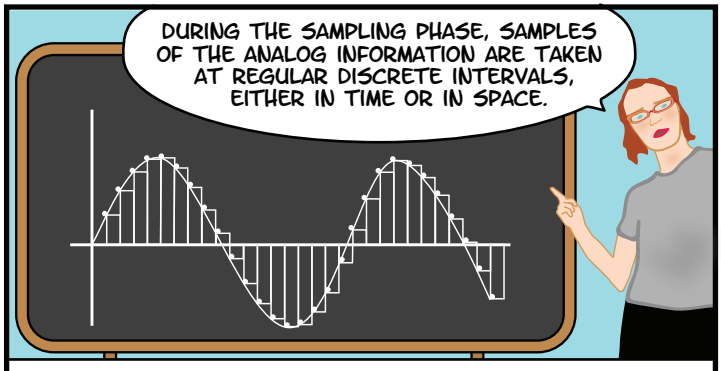
IN THIS PROCESS, WE MATCH ***INPUTS*** AND ***OUTPUTS***– DEVICES THAT CAPTURE AND TRANSFORM INFORMATION (INPUTS) WITH ONES THAT PLAY THE INFORMATION BACK TO US (OUTPUTS) .



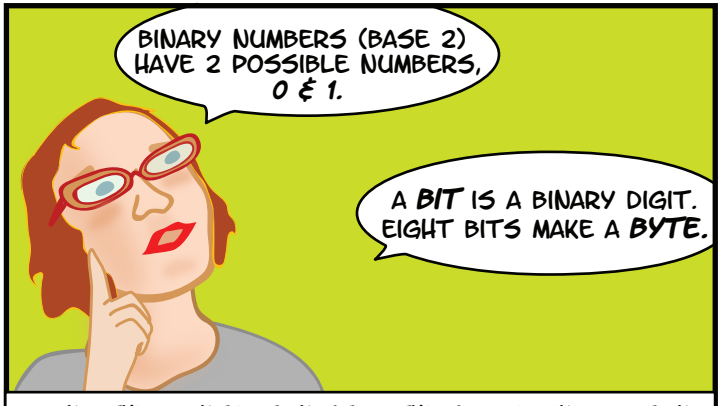
INPUT DEVICES MEASURE ANALOG INFORMATION SUCH AS SOUND WAVES, LIGHT WAVES OR HAND MOVEMENTS. THEY SOMETIMES PRODUCE AN ANALOG ELECTRICAL SIGNAL.



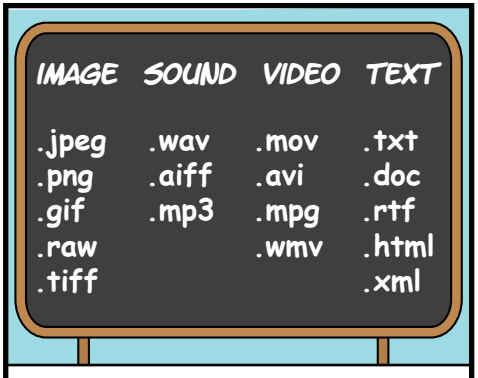
ONCE INFORMATION HAS BEEN CAPTURED BY AN INPUT DEVICE, AN ***ANALOG TO DIGITAL CONVERTER (ADC)*** CONVERTS THE ANALOG INFORMATION TO DISCRETE DIGITAL INFORMATION. THERE ARE TWO PARTS TO THIS PROCESS, ***SAMPLING*** AND ***QUANTIZING***.



THE ***SAMPLE RATE*** IS THE INTERVAL AT WHICH THE SAMPLE IS TAKEN. IT IS EXPRESSED IN FRAMES PER SECOND FOR DIGITAL VIDEO, IN PIXELS PER INCH FOR DIGITAL IMAGING, IN HERTZ (HZ- NUMBER OF CYCLES PER SECOND IN A WAVEFORM) FOR DIGITAL AUDIO.

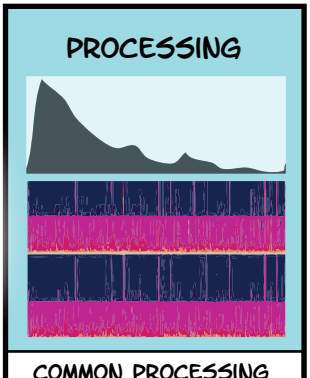


DURING THE QUANTIZATION STEP, THE SAMPLED INFORMATION IS TURNED INTO A FINITE NUMBER OF DISCRETE VALUES REPRESENTED IN BINARY NUMBERS, OR IN ***BITS***. ***BIT DEPTH*** DETERMINES THE LEVEL OF DETAIL IN A DIGITAL FILE.

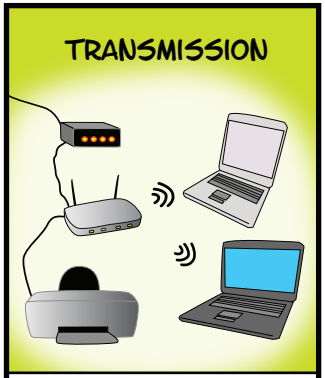


ANALOG INFORMATION CAN BE REPRESENTED DIGITALLY IN MANY DIFFERENT FILE FORMATS. THESE ARE A FEW OF THE MOST COMMON FILE FORMATS, THERE ARE MANY MORE.

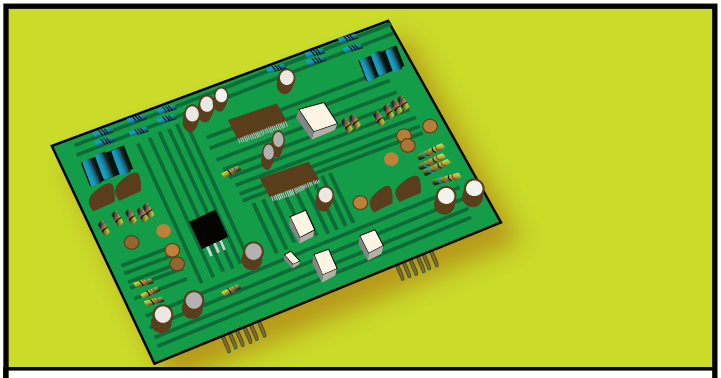
INCREASING STORAGE CAPABILITIES HAS ALLOWED US TO STORE MUCH LARGER FILES.



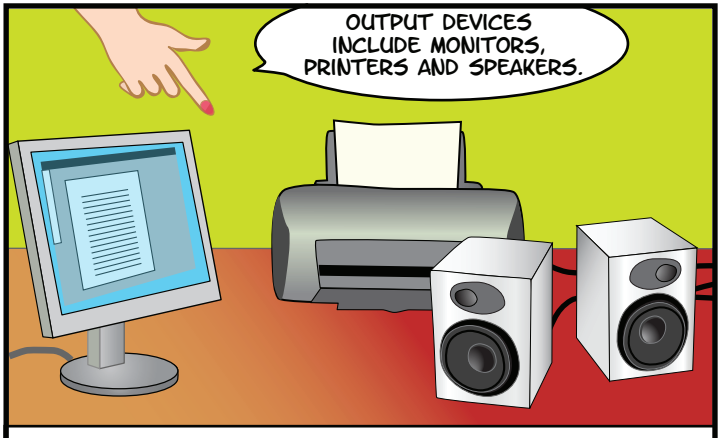
COMMON PROCESSING TASKS INCLUDE COMPRESSION, CONVERSION FROM ONE FORMAT TO ANOTHER, AND ALTERATION



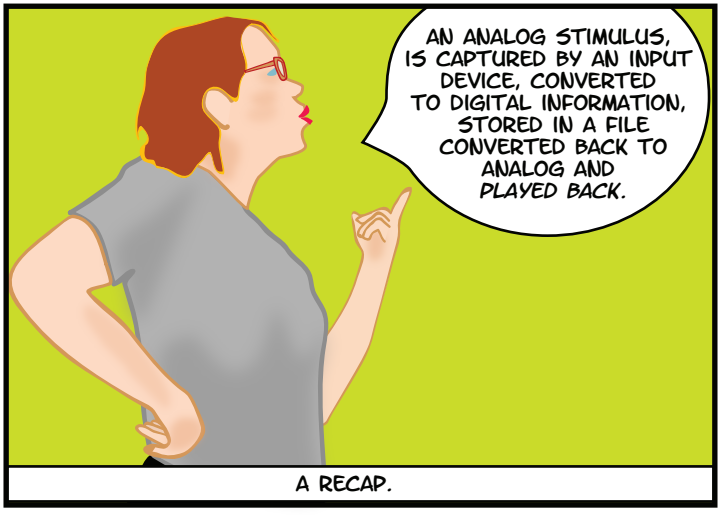
DIGITAL MEDIA CAN BE TRANSMITTED OVER A NETWORK THROUGH A VARIETY OF TRANSMISSION MEDIA.



THE *DIGITAL TO ANALOG CONVERTER (DAC)*, LIKE THE ADC, IS A SPECIALIZED CHIP THAT CONVERTS DIGITAL INFO INTO ANALOG ELECTRICAL SIGNALS.THESE CHIPS ARE OFTEN BUILT INTO DEVICES THAT PLAY DIGITAL INFORMATION LIKE CD AND DVD PLAYERS.



OUTPUT DEVICES CONVERT ELECTRICAL SIGNALS INTO SOMETHING THAT CAN BE PERCEIVED BY HUMANS



THE DIGITAL MEDIA LIFECYCLE IN ACTION...

TO VIEW THE LIFECYCLE IN ACTION, CLICK ANYWHERE ON THE PANEL BELOW.

YOU WILL NEED TO HAVE VERSION 9 OF THE FLASH PLAYER INSTALLED.
HTTP://WWW.ADOBE.COM/GO/BONRN