



CAMF4006



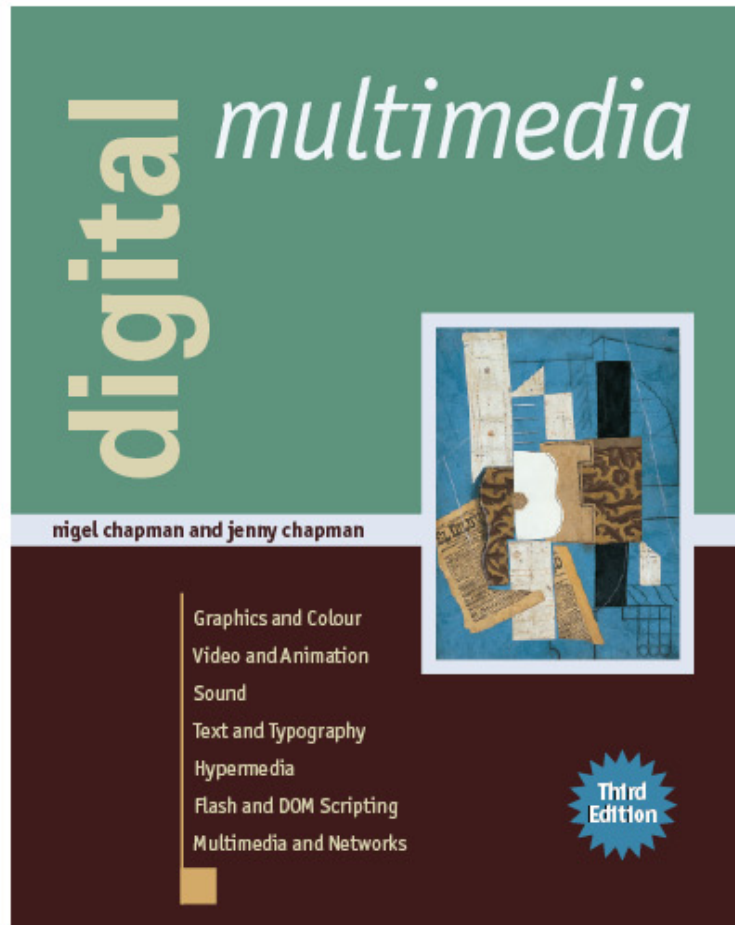
New Media in Practice



Session 1 Part 2



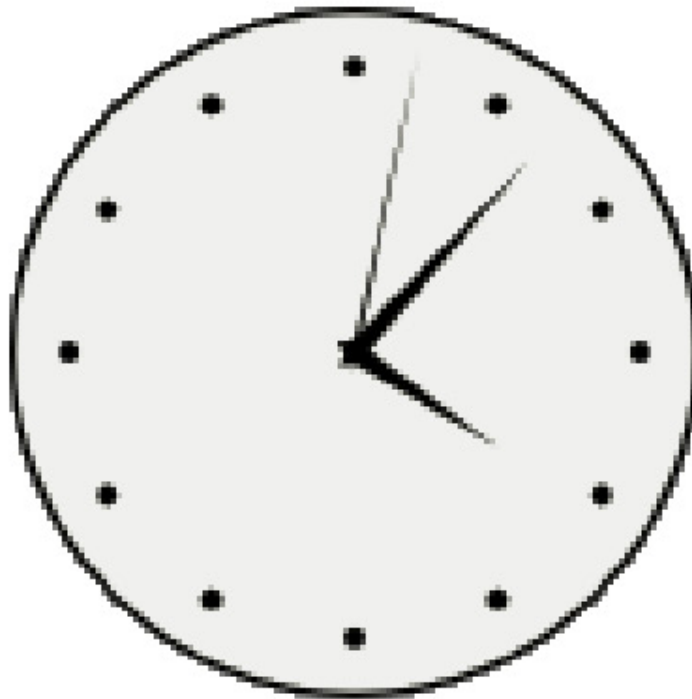
Session 1 Part 2



Chapter 2 Fundamentals



Session 1 Part 2



16:07:02

Analogue and digital representations



Session 1 Part 2

Binary arithmetic

8 bit number is written as a sequence of 1s and 0s, such as 01101010

Which is equivalent to 106 as a decimal number



Session 1 Part 2

Binary arithmetic

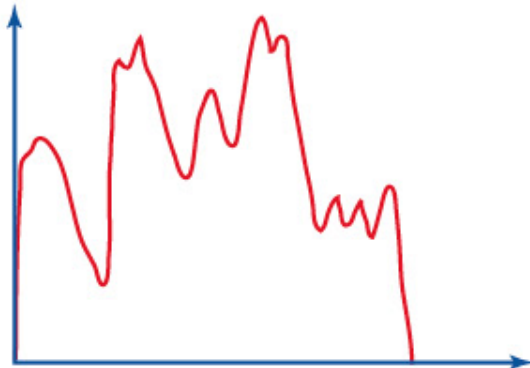
8 bit number is written as a sequence of 1s and 0s, such as 01101010

Which is equivalent to 106 as a decimal number

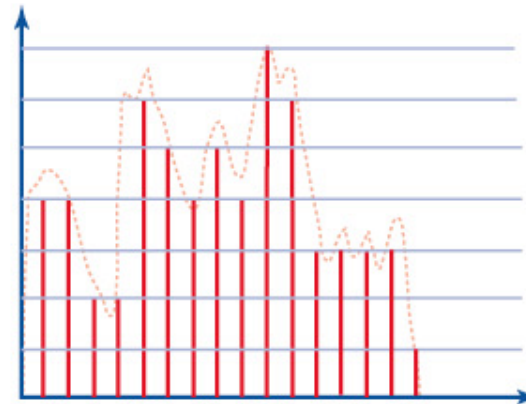
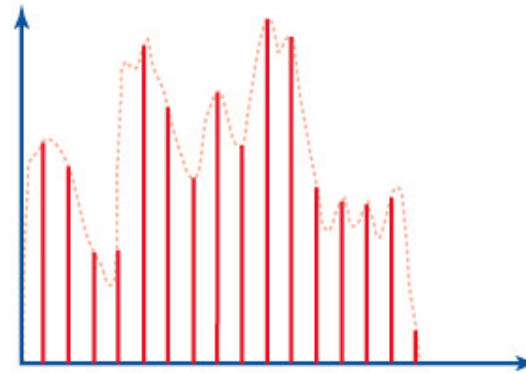
$0+64+32+0+8+0+2+0$, which is the same as
 $(0+2^6+2^5+0+2^3+0+2^1+0)$



Session 1 Part 2



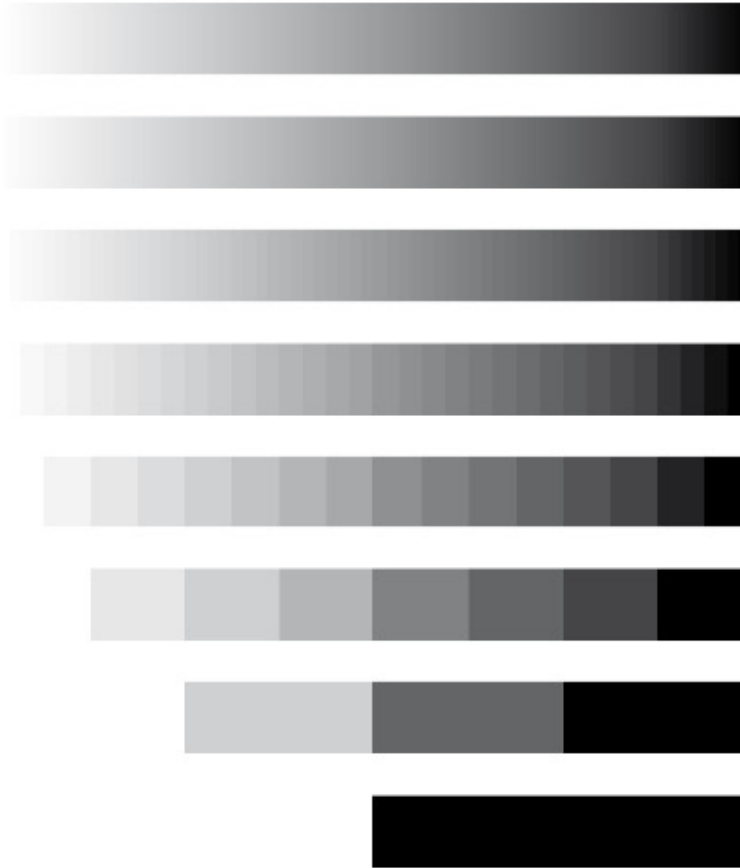
An analogue signal



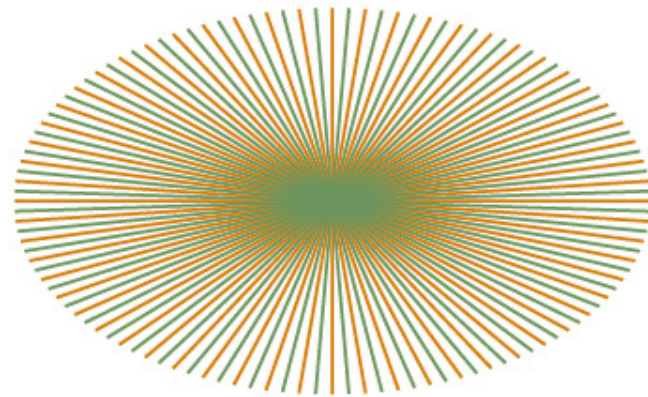
Sampling and quantization



Session 1 Part 2



256, 128, ..., 2 grey levels



Moiré patterns



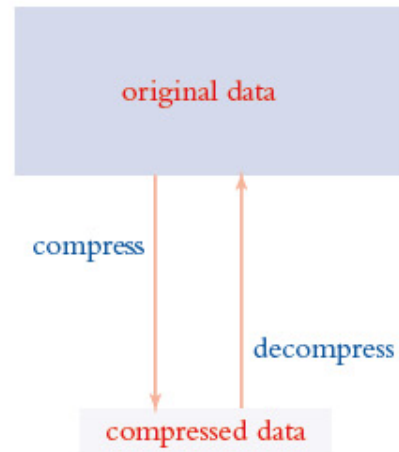
Session 1 Part 2



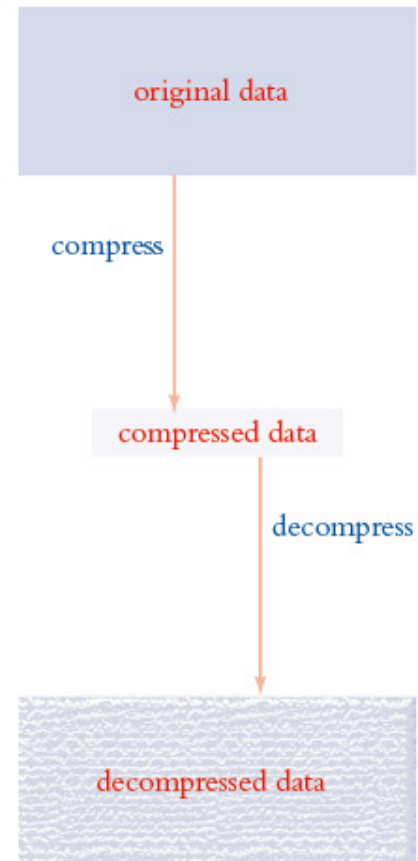
Posterization



Session 1 Part 2



Lossless compression



Lossy compression



Session 1 Part 2



An image made up of pixels

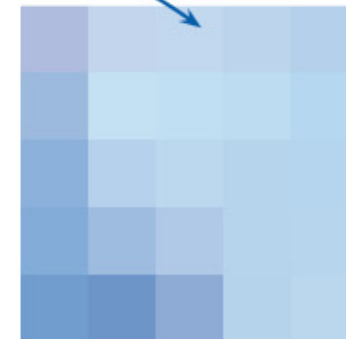


Session 1 Part 2

logical pixels

9BB5FF	B1CFFF	B0D2FF	A9CFFF	9FCBFF
86B5F9	B0DBFF	ADD9FF	A9D6FF	9FD3FF
7AACEB	A0CCFF	A6D3FF	A1D0FF	A0D0FF
74A8E2	87B7F9	99C4FF	A3D0FF	A2D0FF
6698D3	6491D5	7AA6EF	A1CEFF	A5D2FF

physical pixels



Simple bitmapped image representation



Session 1 Part 2



```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE svg PUBLIC "-//W3C//DTD SVG 1.0//EN"
  "http://www.w3.org/TR/2001/REC-SVG-20010904/DTD/svg10.dtd">
<svg xmlns="http://www.w3.org/2000/svg">
  <path fill="#F8130D" stroke="#1E338B" stroke-width="20"
    d="M118,118H10V10h108V118z"/>
</svg>
```

A simple vector graphic image



Session 1 Part 2



A vector drawing and a digital photograph



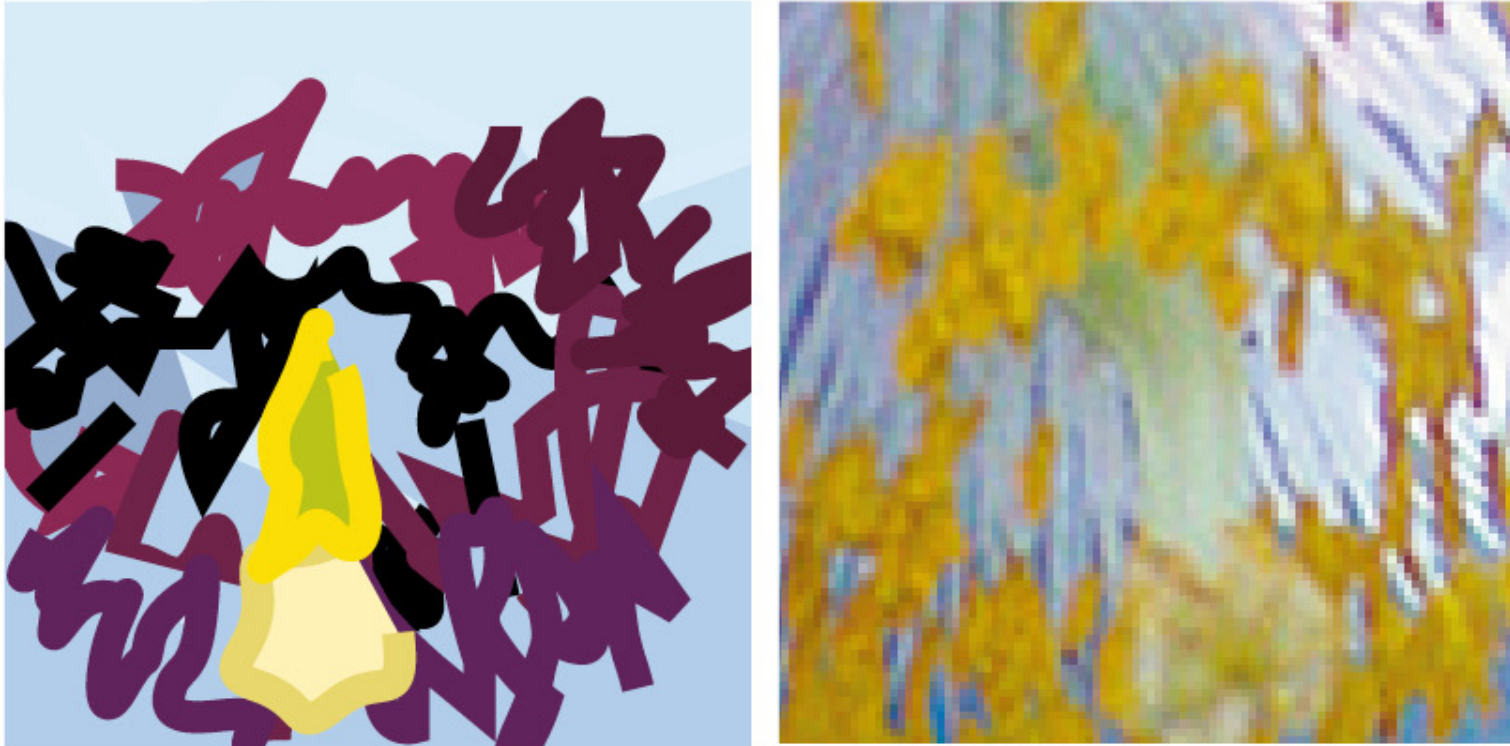
Session 1 Part 2



Transforming the vector image and applying effects to the bitmap



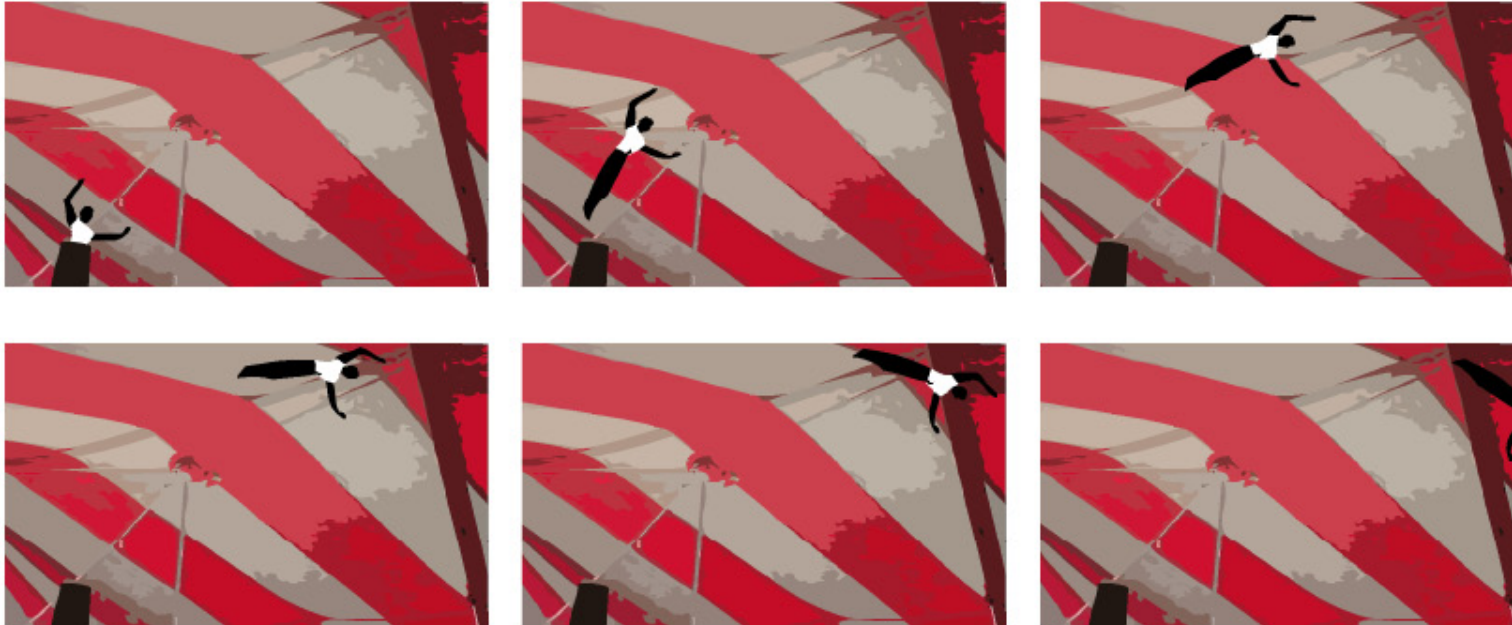
Session 1 Part 2



Scaling a vector image (left) and a bitmap (right)



Session 1 Part 2



Frames from an animation



Session 1 Part 2

**A B C D E F G H I J K L M N O P
Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r
s t u v w x y z
1 2 3 4 5 6 7 8 9 0**

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s
t u v w x y z
1 2 3 4 5 6 7 8 9 0

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q
r s t u v w x y z
1 2 3 4 5 6 7 8 9 0

**A B C D E F G H I J K L M N O P Q R S
T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t
u v w x y z
1 2 3 4 5 6 7 8 9 0**

A small selection of fonts



Session 1 Part 2

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Layout and typography



Session 1 Part 2

Interactivity is a key capability of multimedia and new media

Requires programming using a high level language or by writing scripts using languages such as JavaScript or ActionScript



Session 1 Part 2

MetaData is data about data

Fundamental to organising and searching

EXIF is a standard used for digital photographs



Session 1 Part 2

Tagging is a less structured approach

Popular on the Web – key development in Web 2.0

BREAK