

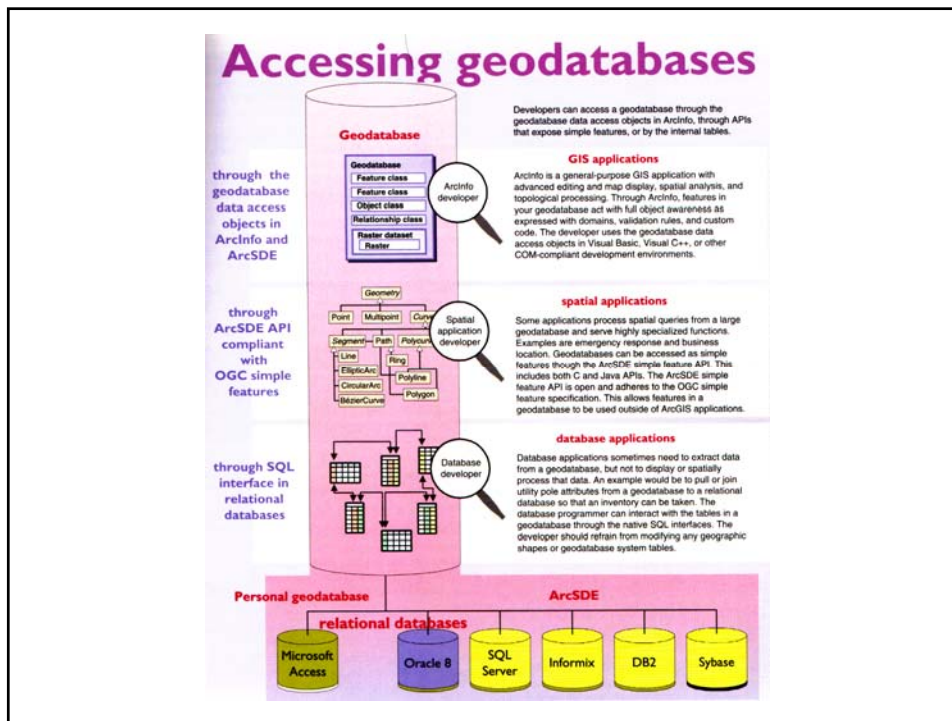
GEOG 475/575
Digital Compilation & Database Design

Instructor: Geoffrey Duh
TA: Jan Dougall

gIS

Digital Representation

- Data models
 - Vector
 - Raster
 - Triangulated irregular network (TIN)
 - Regions
 - Dynamic segmentation
 - Object-oriented
- Data structure
- Attribute & Coordinates



Binary and Decimal Number Systems

Decimal	Binary
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001
10	1010
11	1011
12	1100
13	1101
14	1110
15	1111 $= 1 \cdot 2^3 + 1 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0$

File Size vs Access Speed

- 1 Byte = 8 Bits
- 1 KB = 1024 Byte
- How big is an 8-bit data space?
 $11111111=255$

Primitive DB operators

- Select
- Update
- Delete
- Insert

Map Projections

- The importance of projections in GIS database design
- Commonly used projections
- Problems associated with reprojection