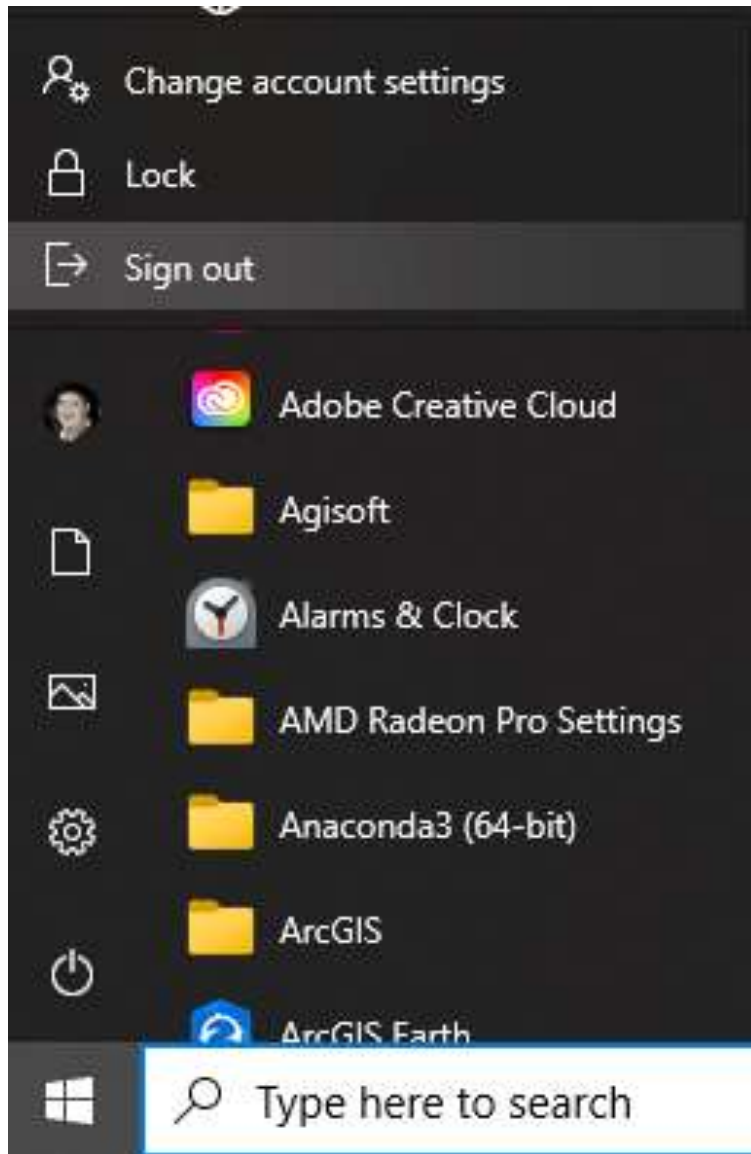


After your lab session: Please Logout / Sign Out, don't Shut down / Restart



When finished, please log out and not turn off the computer; the proper way is in the windows menu, the top item in the left-most column is their profile menu

There is no reason to shut down the computers; they should never be unplugged; also the physical buttons are getting old and fragile and do not always come back up after being pressed

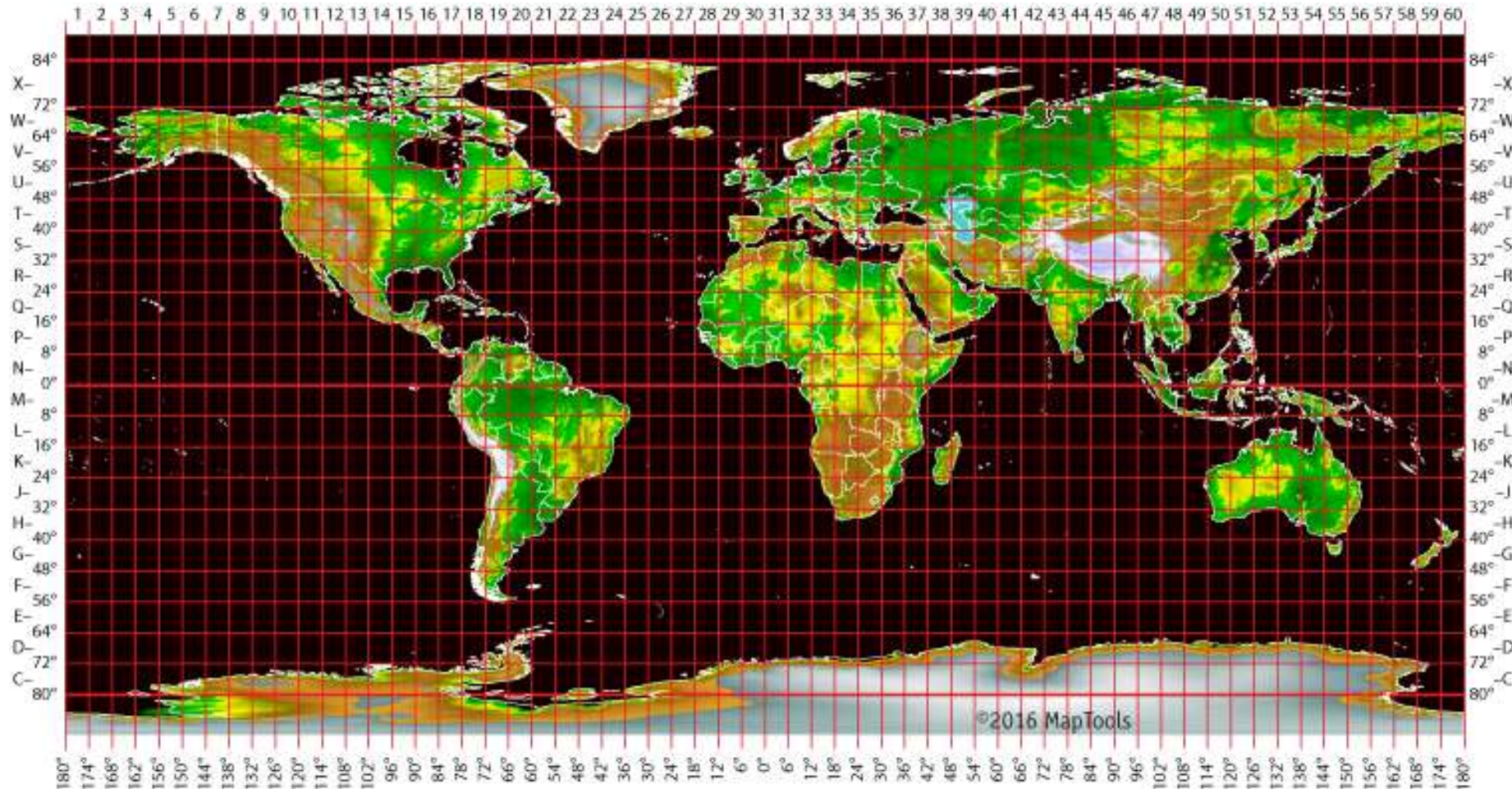
UTM zones – 60 numbered W-E across the globe

- also divided N-S into 8 degree latitude blocks

N to X in northern hemisphere, C to M in the southern

So '10N' may be: zone 10, northern hemi OR equator to 8°North

10U = zone 10, 48-56°North WHAT ?????



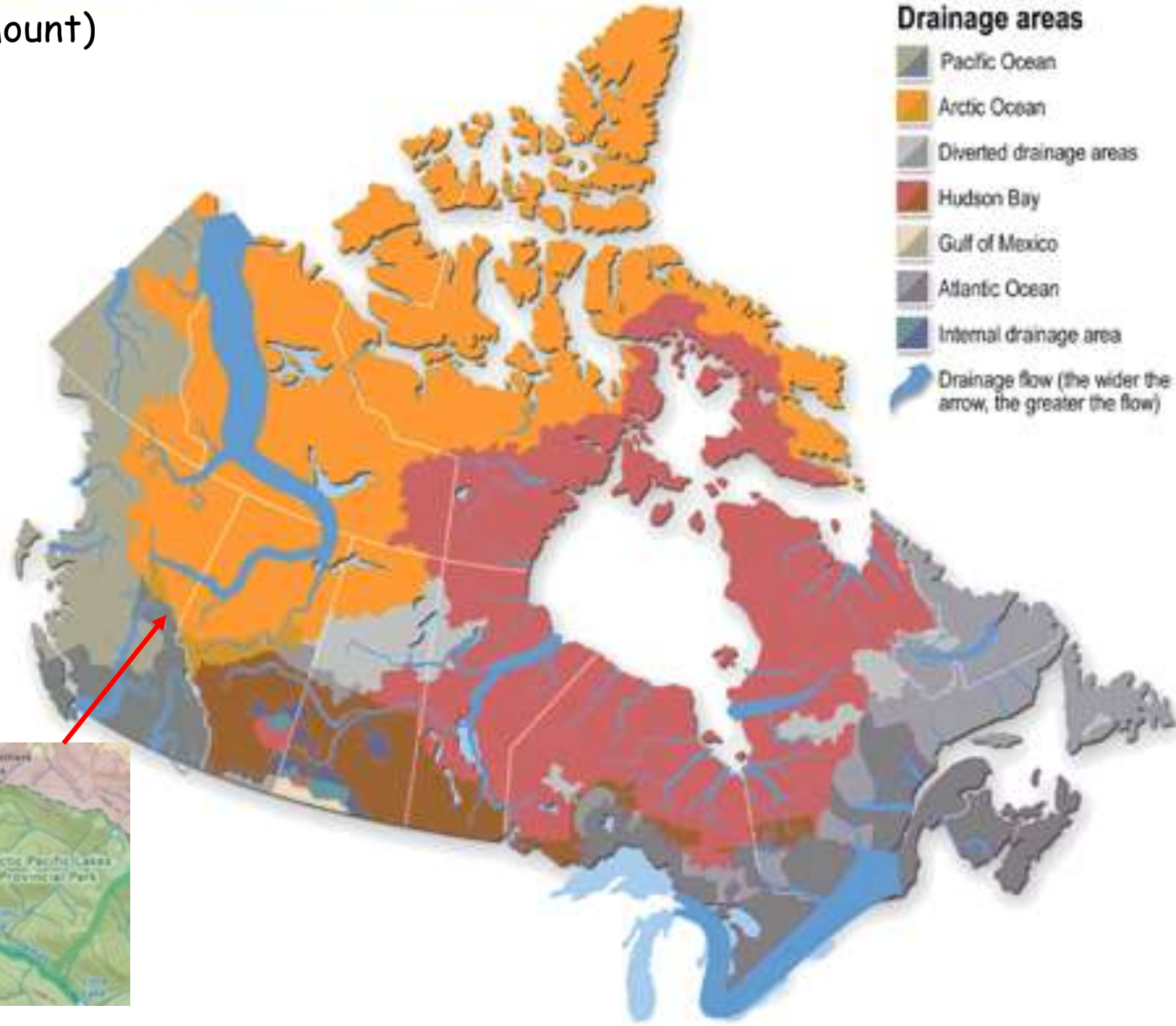
Line techniques: 1. Graduated line symbols:

Canada's continental watersheds
(width=amount)

show movement

Drainage areas

- Pacific Ocean
- Arctic Ocean
- Diverted drainage areas
- Hudson Bay
- Gulf of Mexico
- Atlantic Ocean
- Internal drainage area
- Drainage flow (the wider the arrow, the greater the flow)



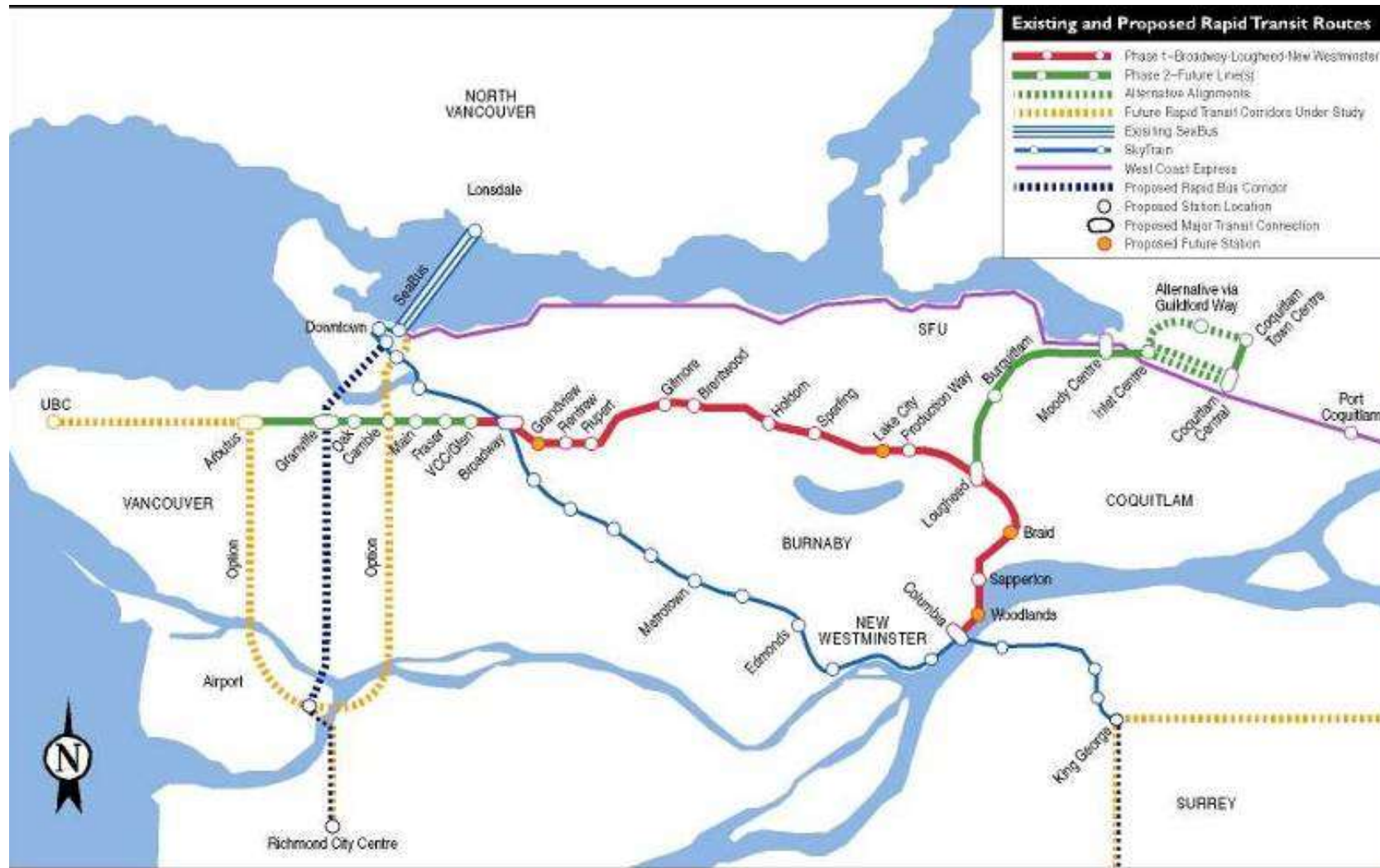
2. Topological Cartograms

These are based on shape (geometry) and **connectivity** e.g. route networks; distance is relatively unimportant; the classic examples are city underground and train maps,



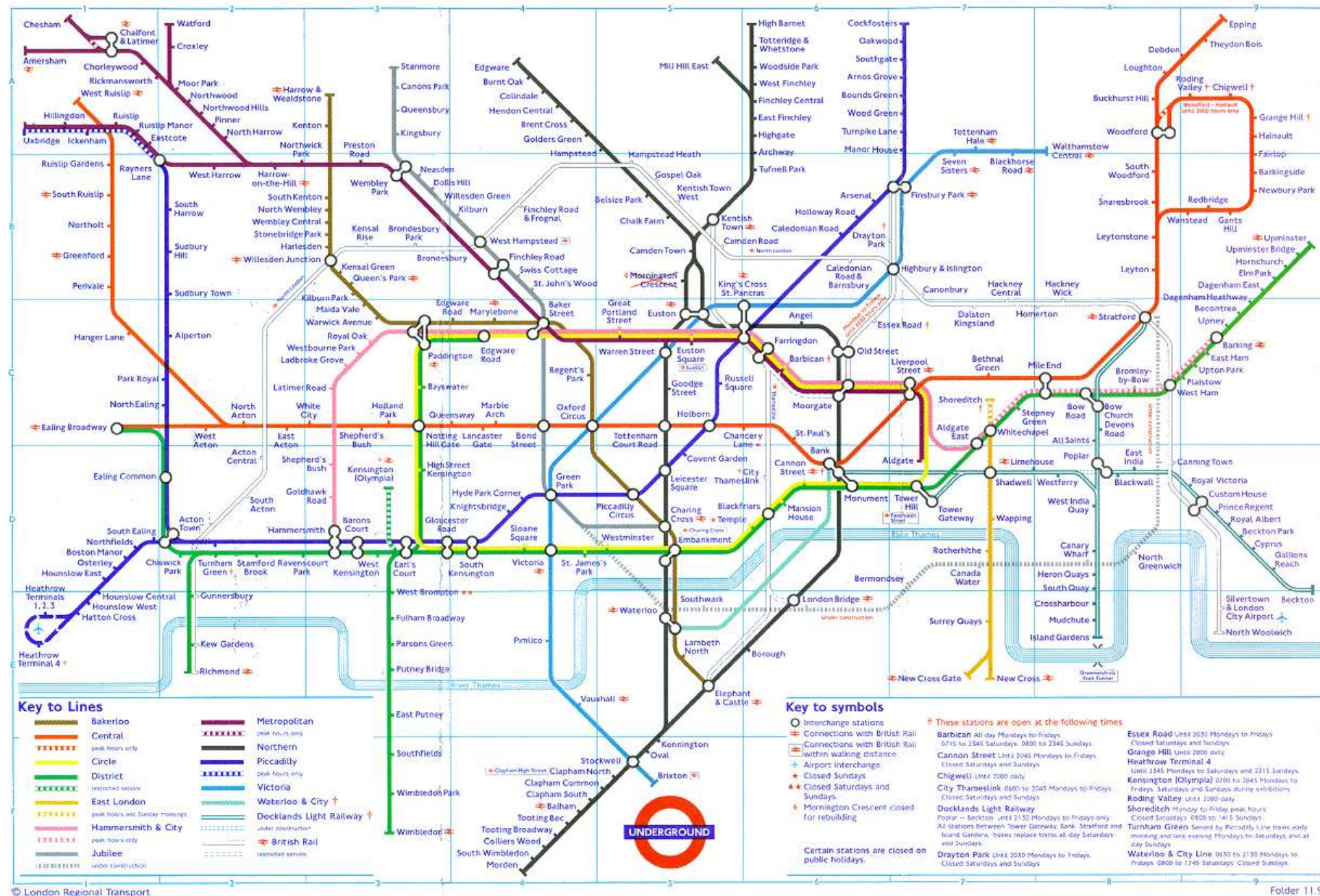
2. Topological Cartograms

These are based on shape (geometry) and **connectivity** e.g. route networks; distance is relatively unimportant; the classic examples are city underground and train maps,



Note: Proposed alignment and station locations subject to change

The classic examples are underground maps: London <http://www.afn.org/~alplatt/tube.html>

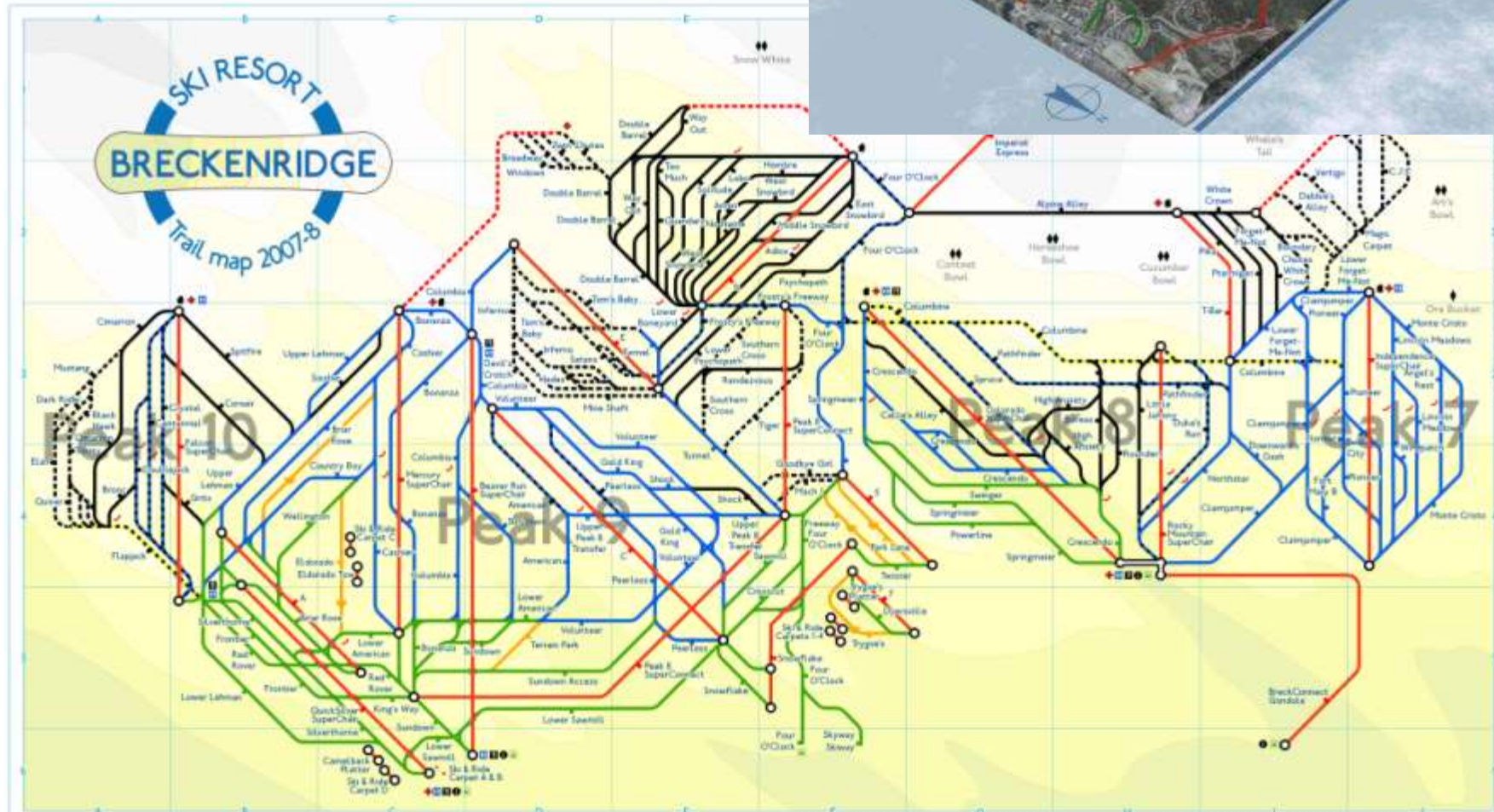
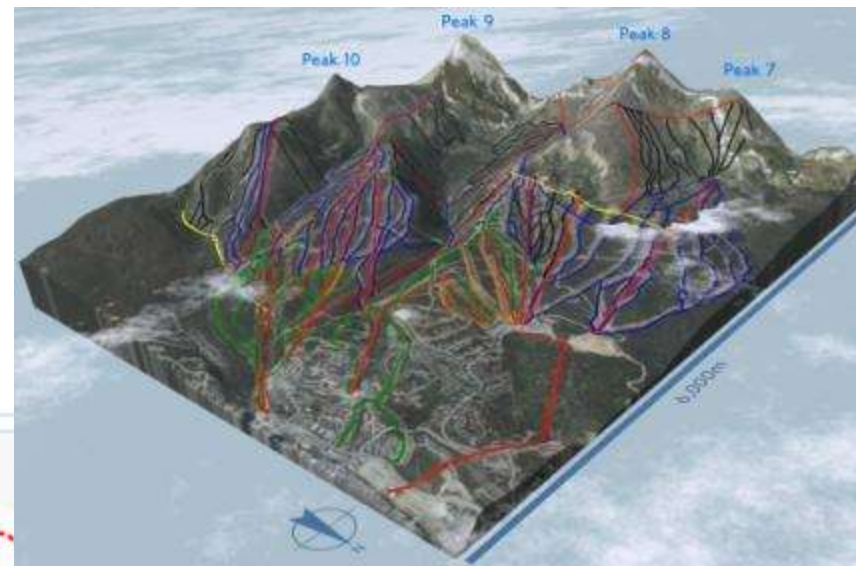


London
Underground
network
superimposed
on aerial view
– actual
locations

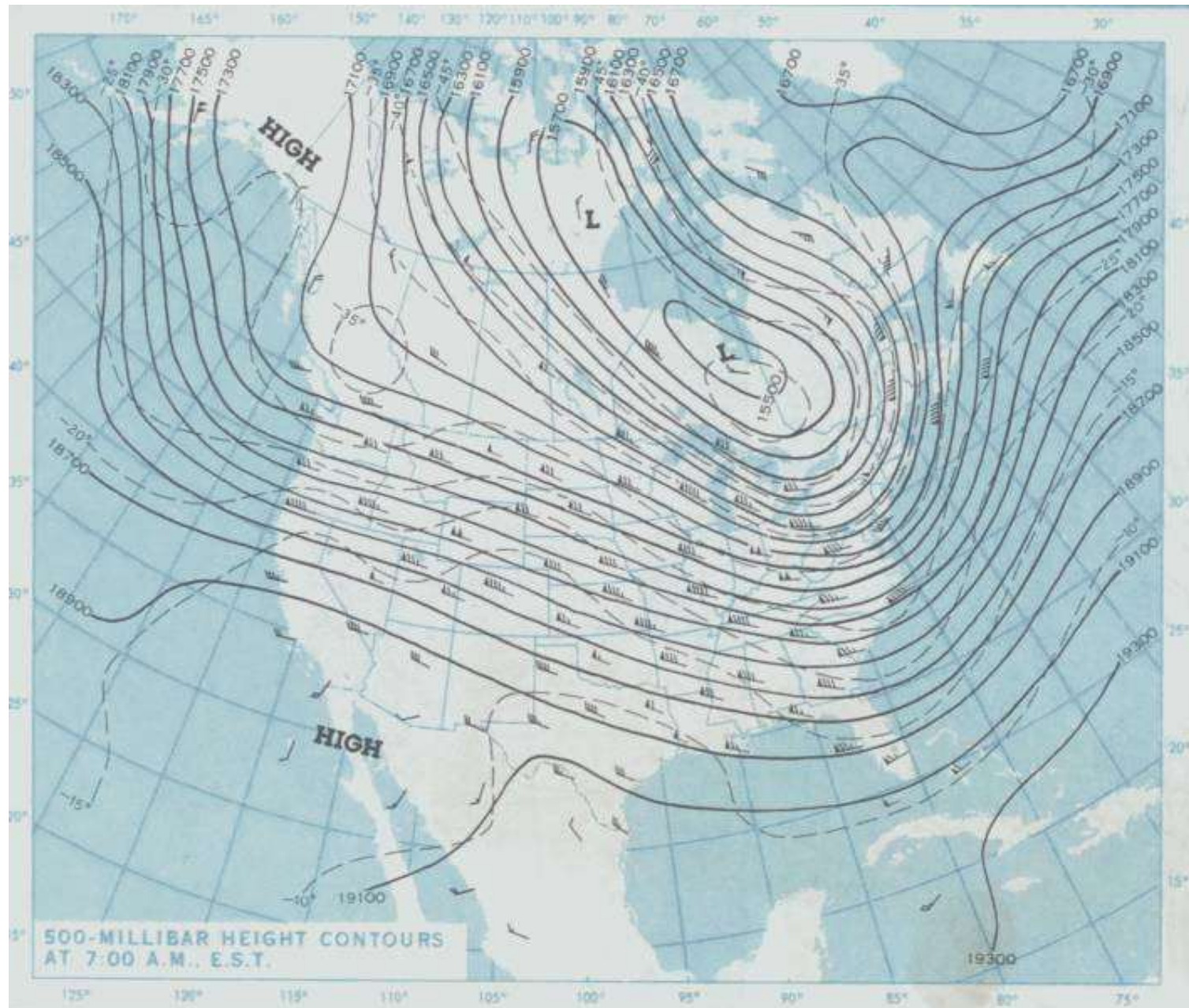


Ski map prototype example:

Ken Field (Esri)



3. Isarithms (Isolines) - lines of equal value e.g. barometric pressure (isobars)



* Created from point data

Early thematic map:
[Halley, Isogonic map](#)
[1701](#)

Isogones:

Lines of equal
magnetic declination
= difference between
true north and
magnetic north



Some selected types of isarithms – mostly climatic

Isobath	depth below a datum (e.g. mean sea level)
Isogonic line	magnetic declination
Isocline	magnetic dip (inclination) or angle of slope
Isohypse (contour)	elevation above a datum (e.g., mean sea level)
Isodynamic line	value of intensity or a component of the intensity of the magnetic field
Isotherm	temperature (usually average)
Isobar	atmospheric pressure (usually average)
Isohyet	precipitation
Isobront	occurrence of thunderstorms
Isanther	time of flowering of plants
Isopag	duration of ice cover
Isodem	population
Isoamplitude	amplitude of variation (often of annual temperature)
Isoseismal line	number (or intensity) of earthquake tremors
Isochasm	annual frequency of aurorae

Isodynam equal traffic tension

Isonoet average degree of intelligence

Canadian wins world Scrabble title: **Isogriv**

[CBC News](#) Posted: Nov 08, 1999 7:50 AM ET Last Updated: Nov 08, 1999

A Montreal (McGill) music professor, Joel Wapnick, has won the World Scrabble Championship

Observers described Wapnick's opening move as "brilliant"because he used all seven tiles to form the word "isogriv"

= a line of equal declination
between magnetic and grid north

More than 100
players from 35
countries
took part in the
weekend
tournament.
Wapnick, won
\$22,500.



	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o		

1	=	Q						R						P	E	A	1
2		I	D			"		I		T	A	L	A	-			2
3			E					'	V	'		M		P	E	A	3
4	'	T	O	-			l	A	I	C	I	Z	E	D	'		4
5		A	X	-				G			C						5
6		B	Y			"		E		H	E			"			6
7	J	O	'					'		O				I			7
8	O	R							E	N	N	U	I	S	=		8
9		E	M	B	O	G	U	E	'	E				O			9
10		T				"				F	Y			g	'		10
11		S		-					O	-				R			11
12	'			-					N	U			G	I	R	T	12
13	W	A	I	D	E				D	U	R	A	L	V			13
14		S	T	I	F	L	E	R	S	"					-		14
15	K	H	A	N					L					'		=	15

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o		