







Components of GIS

- Hardware
 - Computer systems: Servers, Microcomputers, Digitizers, Scanners
- Software
 - OS
 - TransCad, MapInfo, Arcview
- People
 - GIS Specialists & End Users
- Methods
 - Data Storage & Analysis Techniques
- Geo-referenced DATA



City	Auto-DRV	Auto-PASS	Transit	Walk	Other						
/ontreal-M	74.56%	3.35%	15.21%	4.85%	2.04%						
Iontreal-F	57.26%	8.03%	26.26%	7.19%	1.26%	1					
ott-Hull-M	/1.12%	4.96%	14.14%	6.04%	3.73%						
ott-Hull-F	56.73%	13.05%	20.42%	7.97%	1.83%						
oronto-M	74.03%	4.32%	16.34%	3.71%	1.60%						
oronto-F	55.28%	9.34%	28.44%	5.65%	1.28%						
ancouver-M	76.88%	4.39%	10.71%	4.72%	3.30%						
ancouver-F	63.39%	9.06%	18.56%	7.13%	1.86%						
algary-M	78.39%	4.83%	9.74%	4.59%	2.44%						
algary-F	66.11%	10.13%	15.97%	6.40%	1.38%						
Montreal an Obvious difi	d Toronto ferences ir	CMAs d	epict sir ting cho	nilar m ices be	node sp tween t	lits female :	and m	ale co	mmut	ers	

























3-D Rendering of Population Density











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 Example Scope of 	the tas	sk ahea	d	uie of			Toron		
 Example Scope of Province/ 	the tas	sk ahea	d d Tehsil/	Mauza/			Urban Loca	lities	
– Examp Scope of Province/ Region	the tas	sk ahead District	d d Tehsil/ Taluka	Mauza/ Deh/ Village	Total	Metro./	Urban Loca Municipal Committee	lities Town Committee	Cantonment
 Examp Scope of Province/ Region N.W.F.P. 	the tas	Sk ahead District	d Tehsil/ Taluka 59	Mauza/ Deh/ Village 7326	Total	Metro./ M. Corp.	Urban Loca Municipal Committee 30	lities Town Committee 13	Cantonment
 Examp Scope of Province/ Region N.W.F.P. PUNJAB 	The tas	District	d Tehsil/ Taluka 59 118	Mauza/ Deh/ Village 7326 25872	Total 55 245	Metro./ M. Corp. 1 8	Urban Loca Municipal Committee 30 78	lities Town Committee 13 141	Cantonment 11 18
 Examp Scope of Province/ Region N.W.F.P. PUNJAB SINDH 	Division 7 8	District 24 34 21	d Tehsil/ Taluka 59 118 87	Mauza/ Deh/ Village 7326 25872 5871	Total 55 245 163	Metro./ M. Corp. 1 8 9	Urban Loca Municipal Committee 30 78 31	lities Town Committee 13 141 116	Cantonment 11 18 8
- Examp Scope of Province/ Region N.W.F.P. PUNJAB SINDH BALOCHISTAN	Division 7 8 5 6	District 24 34 21 26	d Tehsil/ Taluka 59 118 87 113 [@]	Mauza/ Deh/ Village 7326 25872 5871 6584	Total 55 245 163 46	Metro./ M. Corp. 1 8 9	Urban Loca Municipal Committee 30 78 31 14	lities Town Committee 13 141 116 28	Cantonment 11 18 8 3
- Examp Scope of Province/ Region N.W.F.P. PUNJAB SINDH BALOCHISTAN ISLAMABAD	Division 7 8 5 6	District 24 24 24 24 26 1	d Tehsil/ Taluka 59 118 87 113 [@] 1	Mauza/ Deh/ Village 7326 25872 5871 6584 132	Total 55 245 163 46	Metro./ M. Corp. 1 8 9	Urban Loca Municipal Committee 30 78 31 14	lities Town Committee 13 141 116 28	Cantonment 11 18 8 3
- Examp Scope of Province/ Region N.W.F.P. PUNJAB SINDH BALOCHISTAN ISLAMABAD F.A.T.A.	Division 7 8 5 6 -	District 24 34 26 1 7(Agencies)	d Tehsil/ Taluka 59 118 87 113 [@] 1 42	Mauza/ Deh/ Village 7326 25872 5871 6584 132 2559 [#]	Total 55 245 163 46 1	Metro./ M. Corp. 1 8 9 1	Urban Loca Municipal Committee 30 78 31 14	lities Town Committee 13 141 116 28 - 5	Cantonment