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| **Date & Time** | 14.00pm, March 2, 2015 |
| **Revenue** | SMU SIS MR4.1 |
| **Supervisor** | Doc Kam |
| **Attendees** | Wang Jing  Song Chengyue |
| **Agenda** | 1. Mid-term progress review |

**Minutes:**

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| **Time** | **Topic** | **Comment** | **Action by** |
| 14:00 | Background research | * HPB currently is not using geospatial analysis * Prove our project is useful * Literature in developed countries such as USA, HK shows that they’ve implemented geovisualization * Justify our motivation |  |
| Data dictionary | * Source of the data * Latest update date * Description * Number of attributes |  |
| CSR | * Statistical significance * Underlying test whole notion of CSR * CSR is the context to test the distribution * Simulation * The analysis is performed on CSR with the number of simulations * Patterns: random, clustered, disperse * Significance rejects or supports hypothesis |  |
| Homogeneous vs Inhomogeneous | * Home assumes distribution of services is not affected by any underlying constraints * Whether to conduct analysis on Homo or Inhomo * Boundary technically should improve data analysis * Study the difference btw one n the other and which fits Singapore better * In the end we should be able to recommend |  |
| Analysis Flow | * Quadrat & K-function * L-function * Kernel Density Analysis |  |
| QGIS & R for PPA | * QGIS for quick test * Can do quadrat analysis * Processing > use R scripts directly * Update to 2.8.1 > Kernel Density * Install R 3.0 in C: drive * Control panel > set system variable * 32-bits vs 64-bits * cmd test "r" * Check R scripts Activate in QGIS * Change directory * Processing toolbox * PPA & analysis * Script editor > change grid * R is statistical analysis program * CRAN Task View Analysis * **spatstat** covers both homo & inhomo * Standard documentation * Provide interface to change Grid by changing ‘nx’ & ‘ny’ |  |
| Challenge of using R | * Dependency * Recognize projection automatically * Use script editor to change * Convert data to data frame format * Function “SpatialPoints” converts shp file to data frame * SMU library → Index → Springer (SMU) → Applied Spatial Data Analysis → 1st chapter Spatial Data Import & Export → Spatial PPA → Intensity (Kernel Density) * Build own **L-function** * Nsim (n simulation) * Rester → Heatmap Plugin for Kernel Density Analysis → Limitation: cannot define boundary * Another Kernel Density estimation from R * Create own interface & function to do Kernel |  |
| Tasks to be done | * Analysis |  |
| 15:00 | **END** | | |