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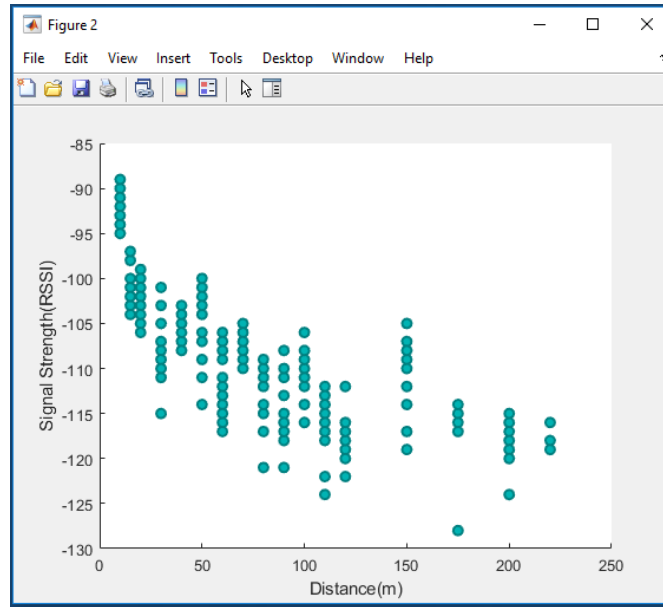
Project Progress Timeline-2

In this week I focused on the modelling of LoRa signal. Data-set was collected in Gordon Square first. For larger distance, the long distance was collected in Regent's Park. Several things has been proved:

1. If a large bandwidth is given to the LoRa, LoRa can send signals to longer distance with higher RSSI.
2. High receiving node can receive better signal quality because of line of sight.

10m.txt - Notepad					10m_high.txt - Notepad				
File	Edit	Format	View	Help	File	Edit	Format	View	Help
Received packet	'	'	with RSSI	-96	Received packet	'	'	with RSSI	-94
Received packet	'	'	with RSSI	-96	Received packet	'	'	with RSSI	-93
Received packet	'	'	with RSSI	-99	Received packet	'	'	with RSSI	-93
Received packet	'	'	with RSSI	-97	Received packet	'	'	with RSSI	-91
Received packet	'	'	with RSSI	-96	Received packet	'	'	with RSSI	-94
Received packet	'	'	with RSSI	-101	Received packet	'	'	with RSSI	-93
Received packet	'	'	with RSSI	-100	Received packet	'	'	with RSSI	-92
Received packet	'	'	with RSSI	-103	Received packet	'	'	with RSSI	-95
Received packet	'	'	with RSSI	-102	Received packet	'	'	with RSSI	-92
Received packet	'	'	with RSSI	-100	Received packet	'	'	with RSSI	-90
Received packet	'	'	with RSSI	-100	Received packet	'	'	with RSSI	-93
Received packet	'	'	with RSSI	-100	Received packet	'	'	with RSSI	-93
Received packet	'	'	with RSSI	-101	Received packet	'	'	with RSSI	-89
Received packet	'	'	with RSSI	-94	Received packet	'	'	with RSSI	-91
Received packet	'	'	with RSSI	-98	Received packet	'	'	with RSSI	-91
Received packet	'	'	with RSSI	-99	Received packet	'	'	with RSSI	-92
Received packet	'	'	with RSSI	-97	Received packet	'	'	with RSSI	-92
Received packet	'	'	with RSSI	-100	Received packet	'	'	with RSSI	-93
Received packet	'	'	with RSSI	-99	Received packet	'	'	with RSSI	-91
Received packet	'	'	with RSSI	-96	Received packet	'	'	with RSSI	-92
Received packet	'	'	with RSSI	-99	Received packet	'	'	with RSSI	-93
Received packet	'	'	with RSSI	-102	Received packet	'	'	with RSSI	-92
Received packet	'	'	with RSSI	-101	Received packet	'	'	with RSSI	-94
Received packet	'	'	with RSSI	-98	Received packet	'	'	with RSSI	-91
					Received packet	'	'	with RSSI	-95

3. After processing data, the result of RSSI versus distances is plotted as a scatter plot:



4. Using Curve Fitting Tool to obtain the curve, which is the same as my assumption:

The assumption is: $PL_{\text{drone}} = L_0 + 10n \lg \frac{d}{d_{\text{ref}}} + N(\mu, \sigma)$, where L_0 is the initial path loss, n is the scalar value of the path loss and N is a random noise. When set d to 10(m), 20(m) and 150(m), the value of constant is near the mean and median of the distance's RSSI. Consequently, the modelling part is completed.

