

Infrastructure less location detection:

1. SCREEN SHOTS

1.1 Menu

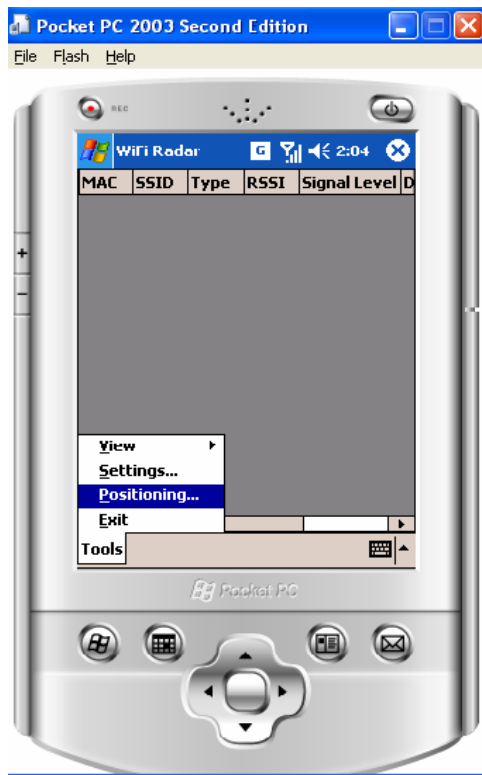


Fig.16 Start up screen

Click on the bottom left button of Pocket PC to activate the Tools menu. The Tool menu consists of the following sub-menus:

1.1.1 Views

Switches between List view and Graphic (Radar) view of the Main GUI:

- Clicking the “List” submenu item will show the List View window.
- Clicking the “Radar” submenu item will show the Graphic View window.

1.1.2 Settings

Activates the Settings dialog for user to change the settings of the program: Mode (Indoor, outdoor), Scanning Interval.

1.1.3 Positioning

Activate the Positioning GUI

1.1.4 Exit

Clicking this menu will terminate the program.

1.2 Main GUI

1.2.1 List View

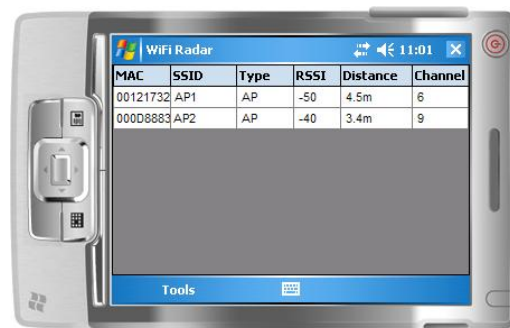


Fig. 19 List view screen

Clicking on the “Tools->View->List” menu item will activate this window.

It lists all available APs and their necessary properties like:

- MAC: The MAC address of AP. It is assigned by the manufacturer.
- SSID: Access Point name
- Type: The type of AP. This value can be:
 - AP: Access Point
 - Ad-hoc
 - Unknown
- RSSI: Signal strength
- Distance: The approximate distance to that AP in meters
- Channel: The channel number that AP is operating
- Signal Level: The signal level of each AP. There are 4 levels:

- Excellent: When the RSSI is between -10 and -26
- Very good: When the RSSI is between -27 and -42
- Good: When the RSSI is between -43 and -58
- Low: When the RSSI is between -59 and -74
- Very Low: When the RSSI is below -75
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1.2.2 Graphic (Radar) View

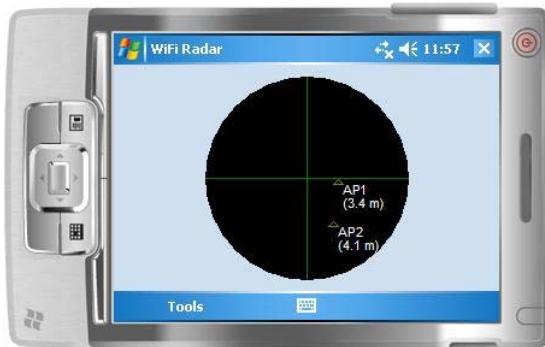


Fig. 20 Graphic view screen

Clicking on the “Tools->View->Radar” menu item will activate this window.

It lists all available APs and there names. The position of the AP depends on its signal strength. If the signal strength is strong, the position is near the center of the black circle, if the signal strength is weak, the position is near the border of the black circle. The approximate distance to each AP is also listed below the AP name.

1.2.3 Positioning View

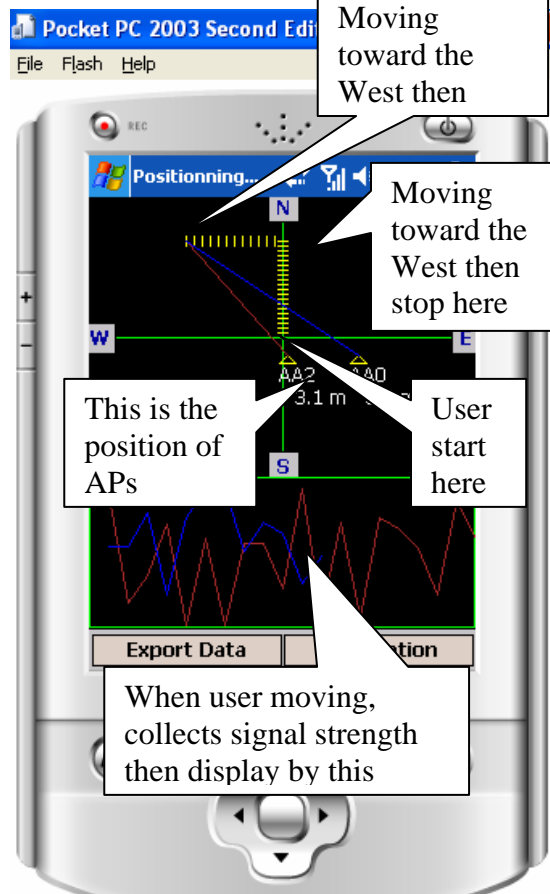


Fig. 21 Positioning view screen

User can view the detail data that the program selected by click on Export Data

1.2.4 Export Data

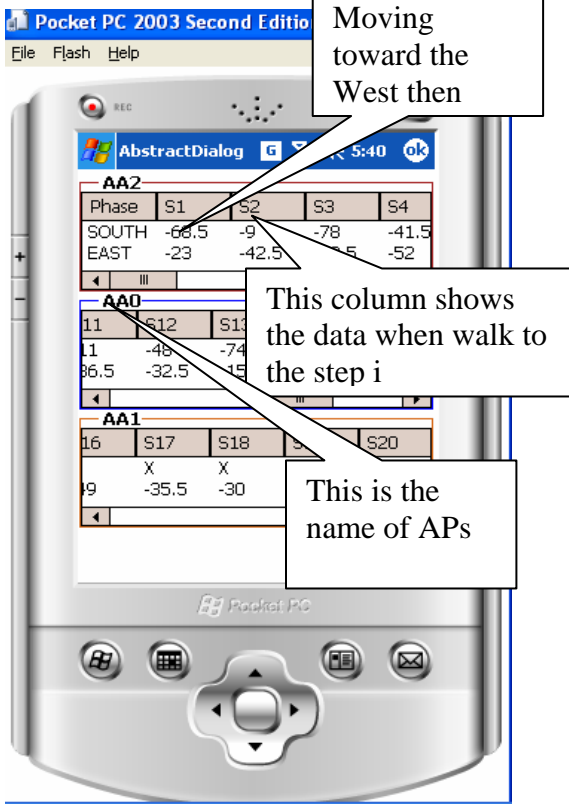


Fig. 20 List data view screen

This tab allows user to change the distance calculation mode

- Mode: Allows user to switch between Indoor (default) or Outdoor mode to get more accurate distance calculation mode and AP scanning interval.
- Scan Interval: The time (in millimeters) delay between two AP scanning.
 - The default value is 1000ms
 - The min value is 500ms
 - The max value is 5000ms

9.3.2 View Tab



Fig. 24 Screen shot of View Tab

This tab allows user to customize the List view and Radar view.

User can show or hide a certain column on the List view by selecting or deselecting its name in the "List View" group on this tab. The SSID is a required column of the List view so user cannot deselect this name.

User can show or hide a certain property on the Radar view by selecting or deselecting its name in the "Radar View" group on this tab. User can deselect all of names. In this case, there are only rectangles will be shown on the Radar view.

9.3 Settings GUI

Clicking the "Tools->Settings..." menu item will activate this dialog.

9.3.1 Options Tab

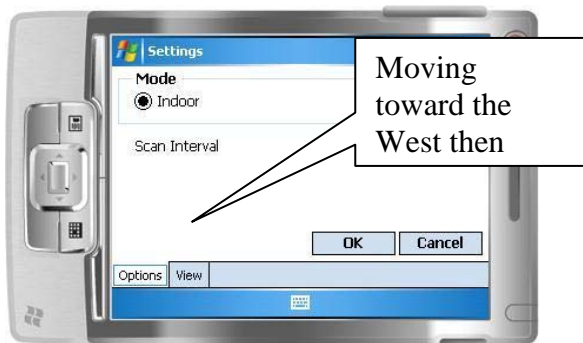


Fig. 23 Screen shot of Option Tab