

Progress Review 10

Team A

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Progress

- Initial object tracking result
- Modified ROS node of SSD
- Parsed Radar data
- System integration design
- Set up desktop

Object Tracking

Advantages:

- Multiple objects tracking
- High FPS 20+
- Robust to light variation

Disadvantages:

- Rotation variant
- Scale variant

Radar

- Successfully parsed data
- Received parsed data in the form of variables in real time
- Data in Terminal as well as through code
- Fully fledged GUI is in work.

<code>g_target_report_cnt</code>	Uint16	2	
<code>g_target_report_range</code>	Array[64] Signed16	128	
		128	
<code>g_target_report_range_rate</code>	Array[64] Signed16	128	
		128	
<code>g_target_report_theta</code>	Array[64] Signed 16	128	
<code>g_target_report_amplitude</code>	Array[64] Signed16	128	

@harry-Lenovo-Y50: /usr/include/boost/bin

Target 1 range (m): 1047

DSP Version: 3.76.15

Scan type: 2

Scan index: 55743

Target count: 6

Target 1 range (m): 565

DSP Version: 3.76.15

Scan type: 1

Scan index: 55743

Target count: 517

Target 1 range (m): 1035

DSP Version: 3.76.15

Scan type: 2

Scan index: 55744

Target count: 518

Target 1 range (m): 1970

DSP Version: 3.76.15

Scan type: 1

Scan index: 55744

Target count: 516

Target 1 range (m): 1049

DSP Version: 3.76.15

Scan type: 2

Scan index: 55745

Target count: 6

Target 1 range (m): 565

DSP Version: 3.76.15

Scan type: 1

Scan index: 55745

Target count: 516

Target 1 range (m): 221

DSP Version: 3.76.15

Scan type: 2

Scan index: 55746

Target count: 518

Target 1 range (m): 574

SSD ROS Node

- Installed and configured Caffe in ROS workspace
- Modified to ROS node
- Had some issues to launch that

System Design

Using ROS to do the integration

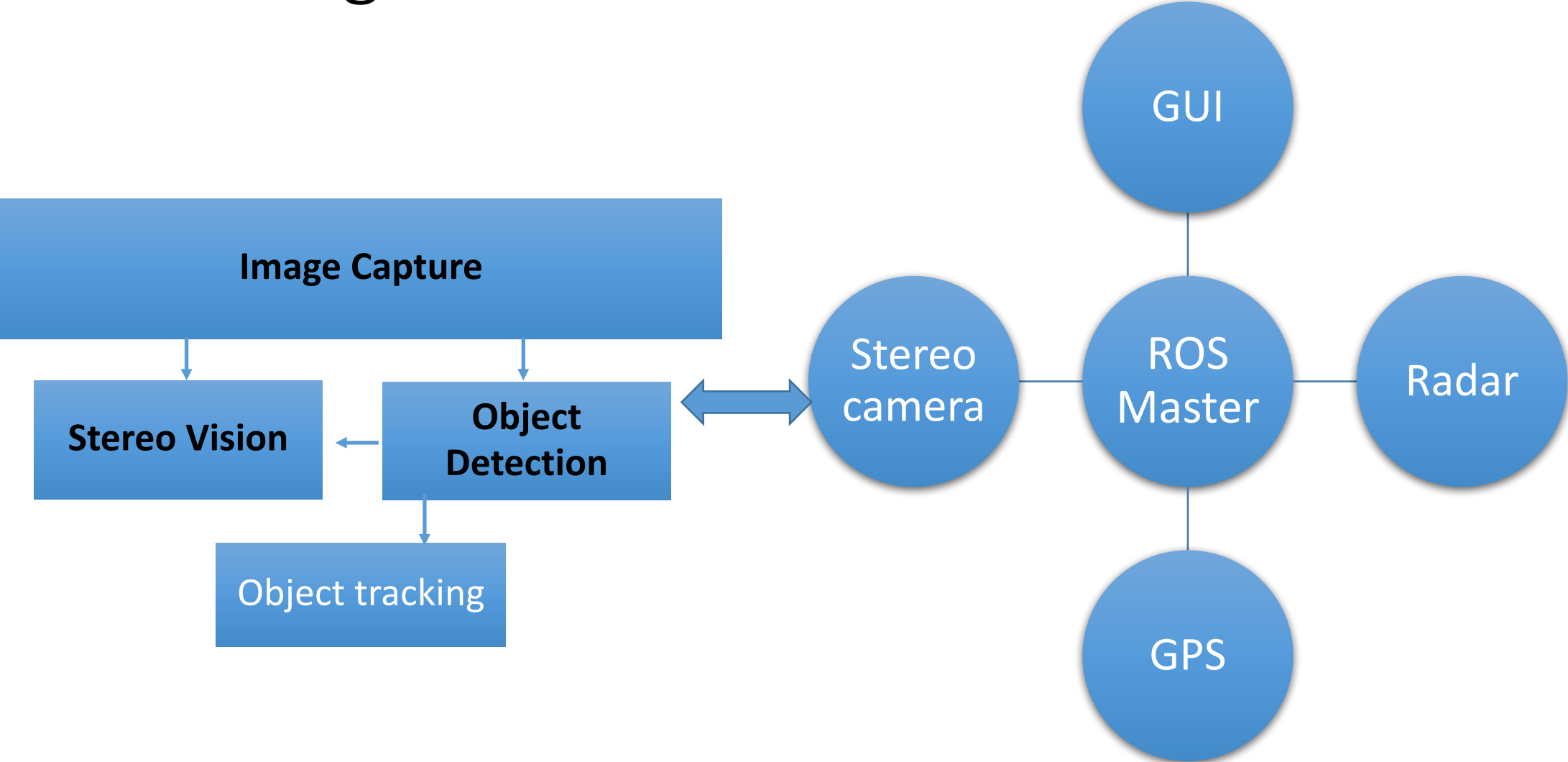
Advantage:

1. Multiple sensors
2. Multiple threads
3. Easy for communication and analysis

Disadvantage:

1. Real-time performance

System Design



Future work

- Modify subsystems to ROS node
- Initialize sensor fusion
- Radar Live Visualization

Thank you