



AUTONOMOUS AND AUGMENTED VEHICLE SECURITY



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MEASUREMENTS

Fuck this shit
security concerns in augmented and autonomous vehicles. We have developed and built a robotics testbed and simulator on which we can measure and apply real-world data. We primarily focus on the two coupled weak points in augmented automotive cybersecurity: wireless transceiver entry points into an unsecured Controller Area Network (CAN).

MATERIALS & METHODS

The following materials were required to complete the research:
The following equations were used for statistical analysis:

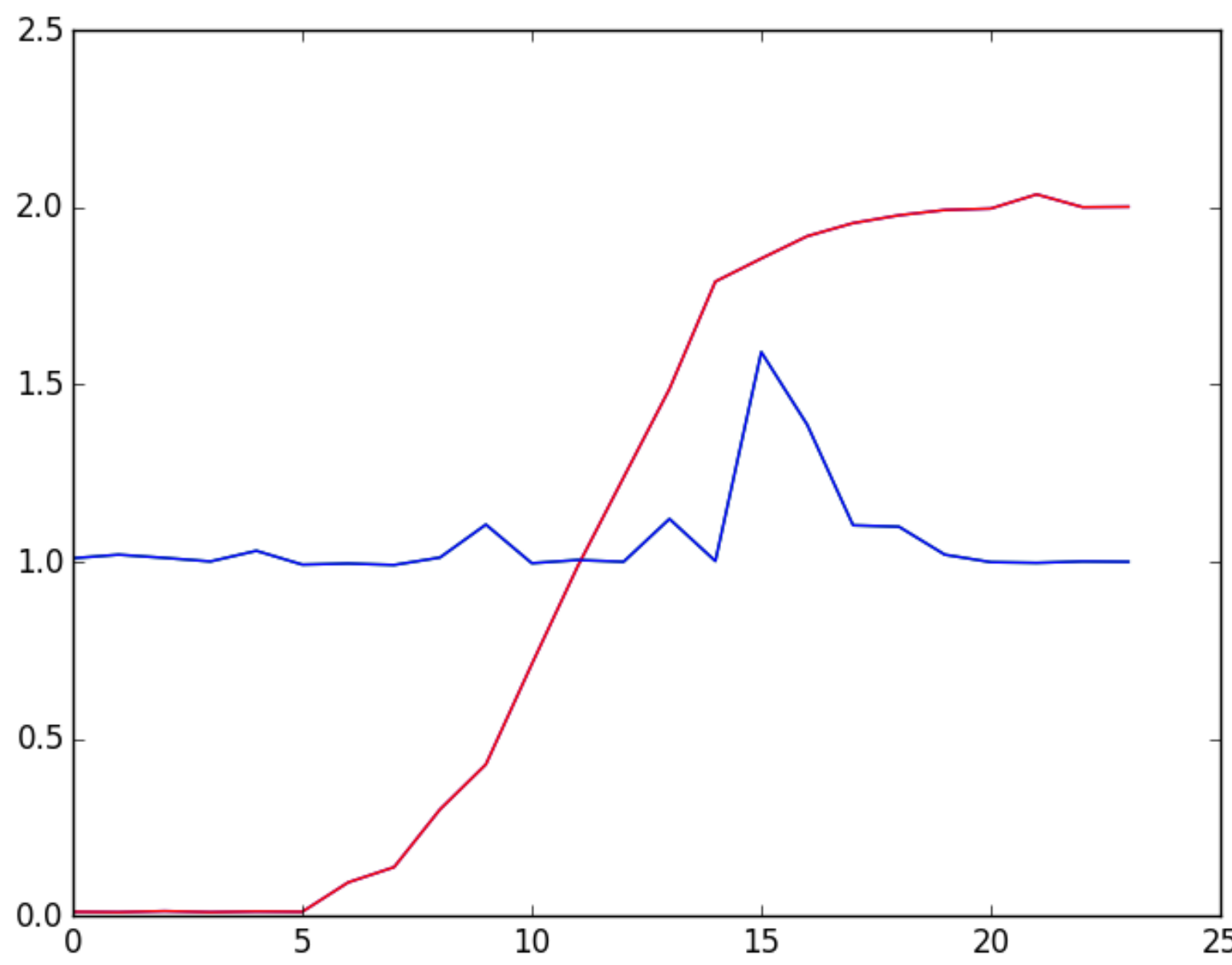
MODULES

Our primary modules were broken down into:

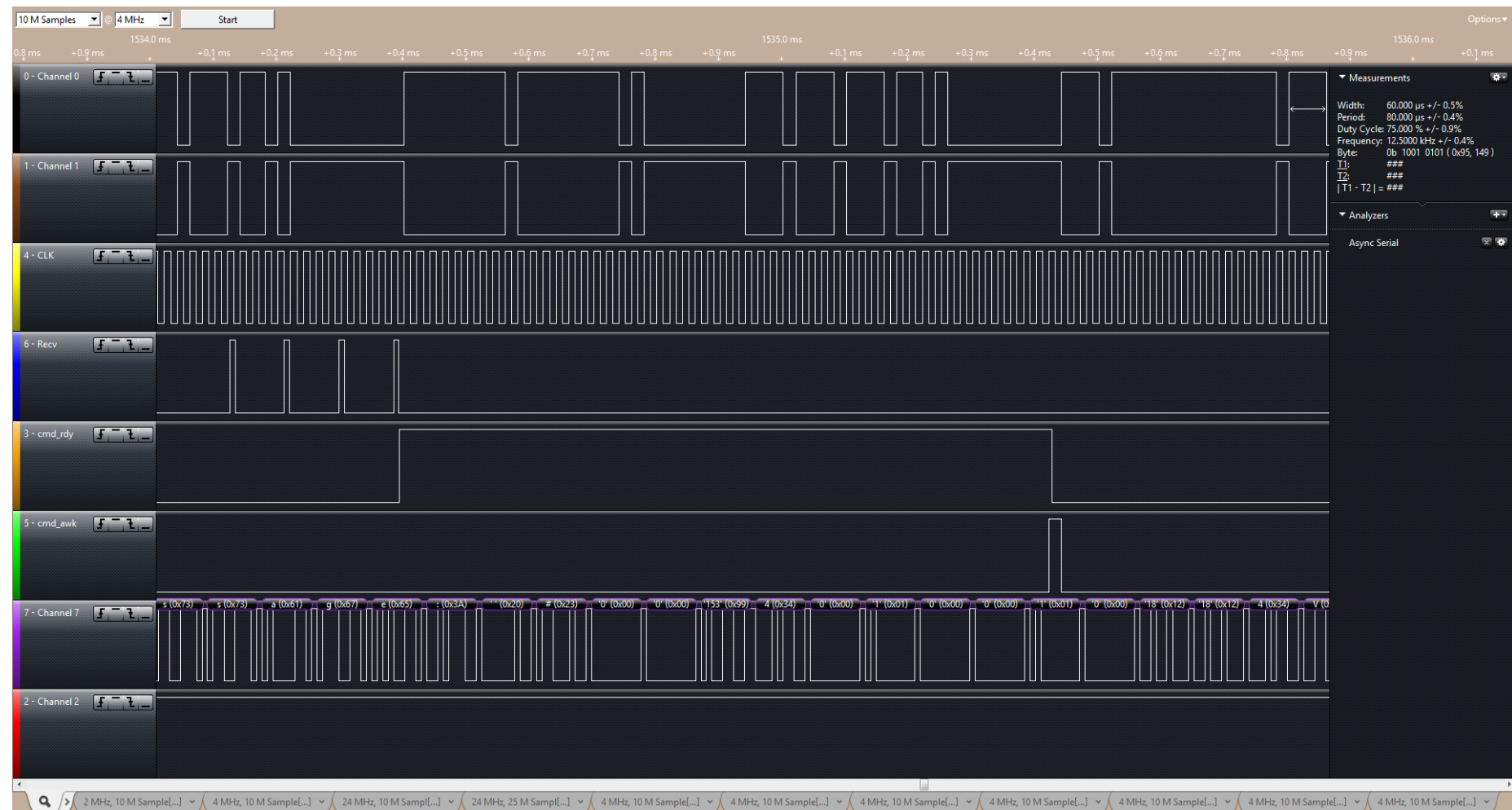
1. FPGA -
CAN Bus
UART - CAN Packet Translation
PWM Generation
Hardware Encryption
2. Wireless Transceivers -
Data Transmission
Software Encryption
3. Robotics Testbed -
Data Measurement
4. Embedded -
IMU Measurement
Motor Control (PID)
Laptop to CAN Bus Interface
Sensor Interface
5. Simulator -
Network Timing Constraints
Large Data Generation

DATA

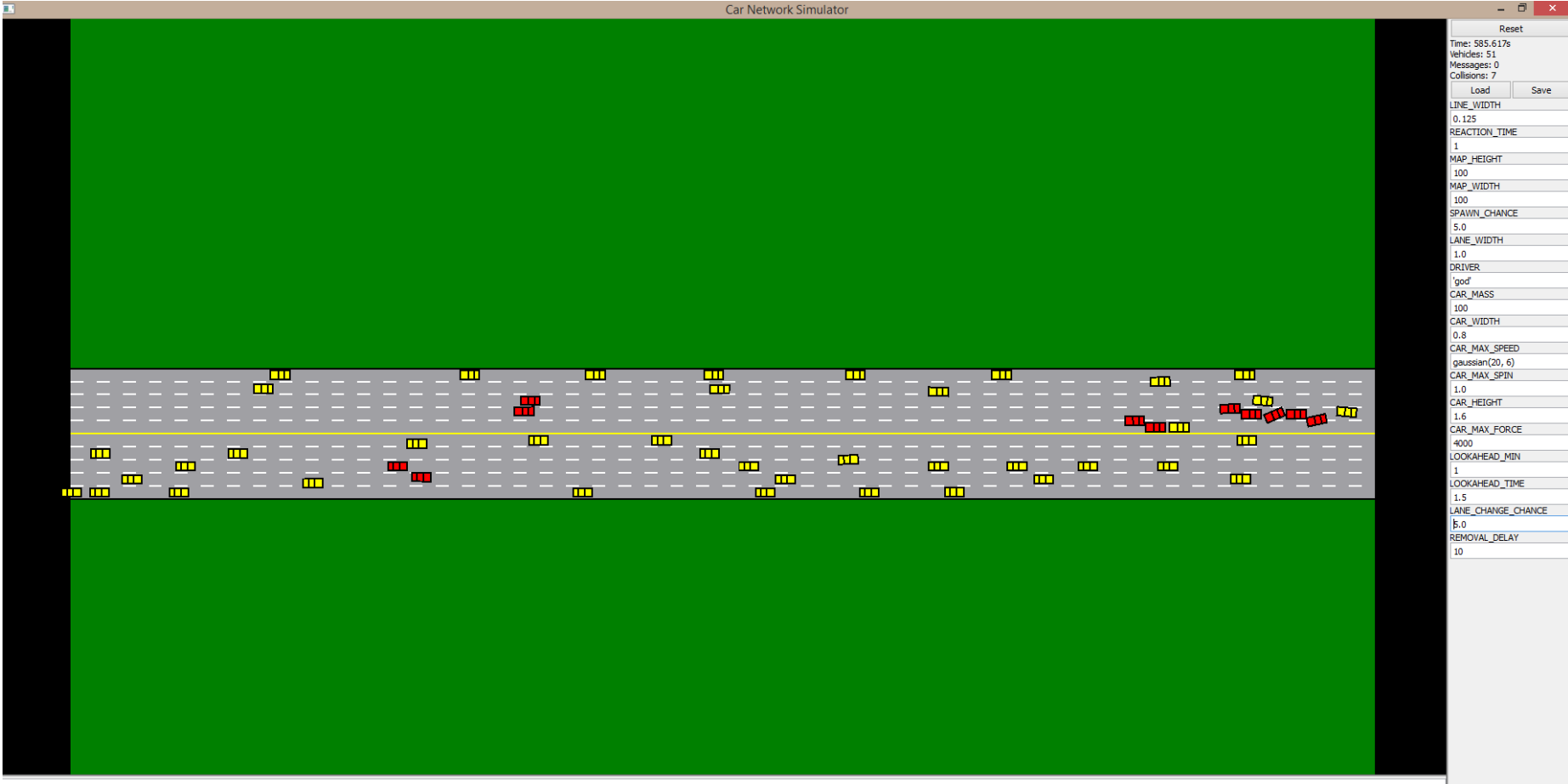
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Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 1: Table caption

FUTURE RESEARCH

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