Valarm: Versatile Asset Locator And Remote Monitor

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Introduction

- We have become a mobile information society
- Modern telephones contain sensors for recording various geodata:
  - GPS
  - Accelerometer
  - Microphone
  - Video/Still Camera
- With increasingly ubiquitous 3G/4G/Wi-Fi connections mobile phones can upload collected data from the field to the cloud

Introduction

- In the Fall of 2011, Lorenzo's precious Honda CBR1000RR motorcycle was stolen from his garage while he slept soundly inside

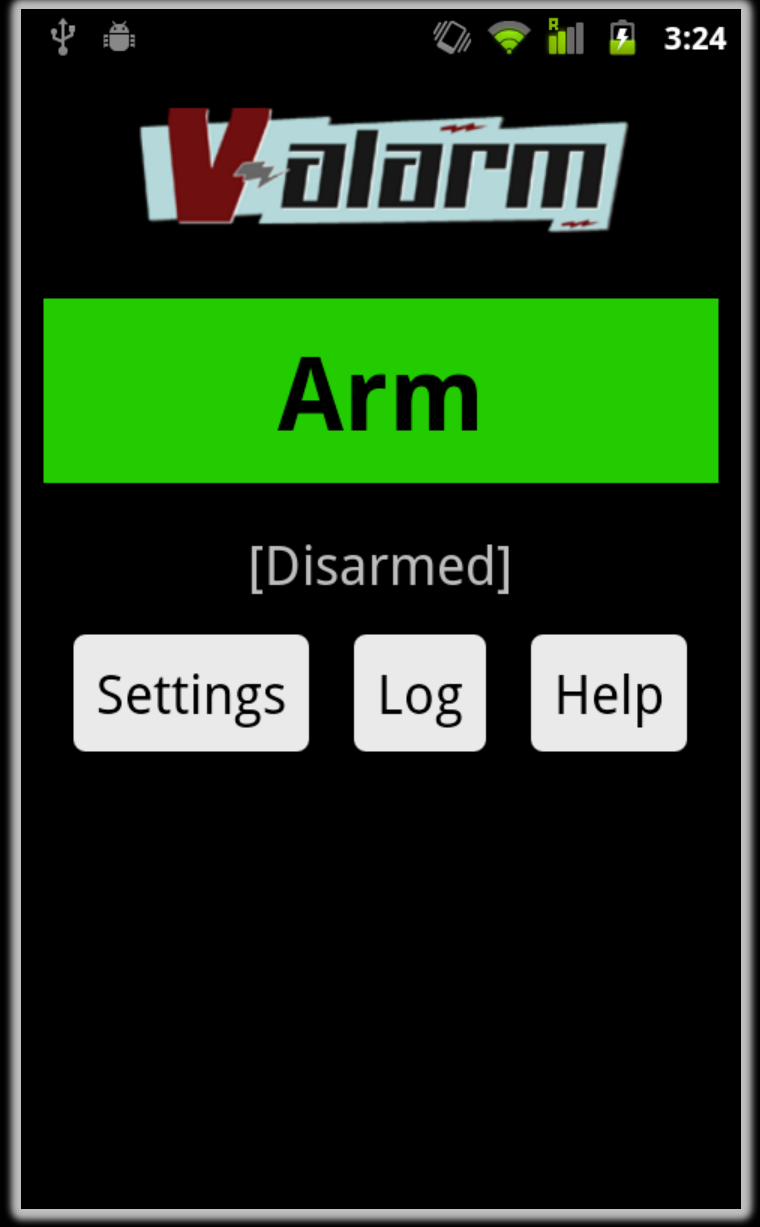
The Birth

- Valarm was born in 2012
  - If my asset is tampered with can I be alerted?
  - Android phones are becoming cheaper
  - Mobile phones contain accelerometers, GPS, SMS, and internet capabilities
- Android app?

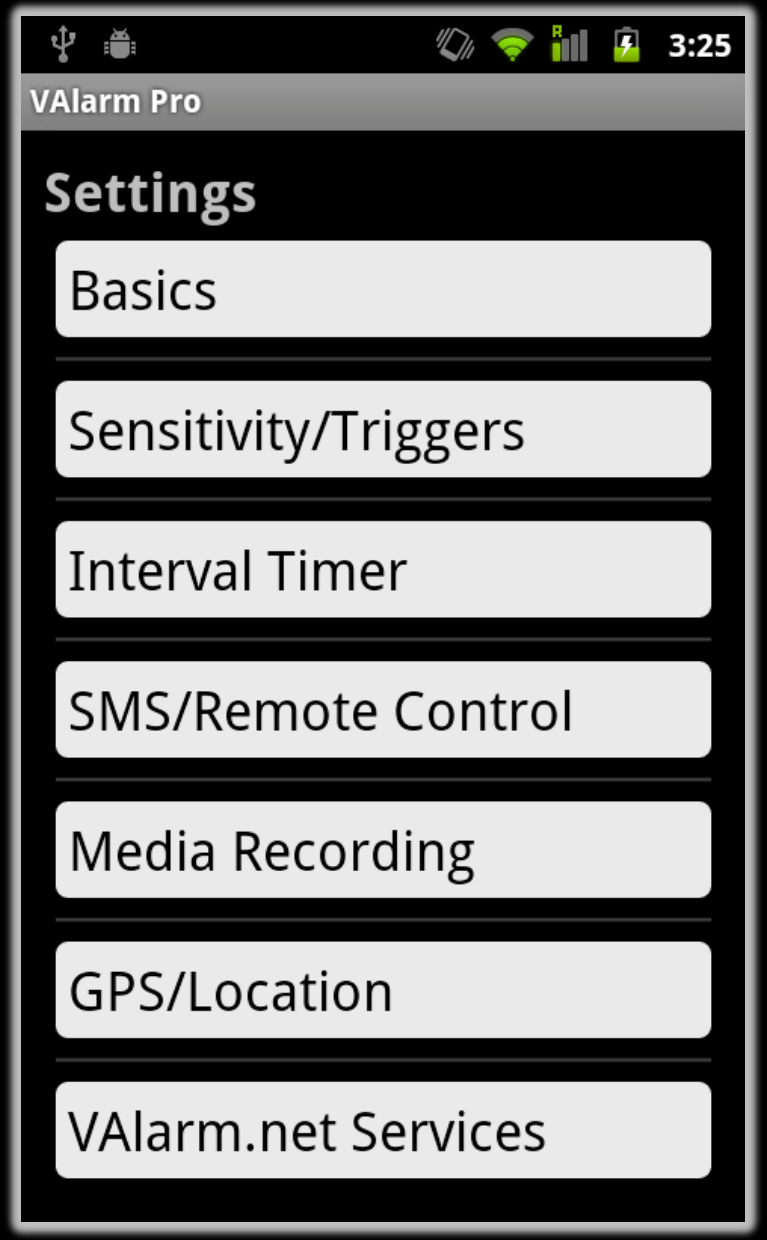
Use Cases

- Asset tracking
  - Vehicle
  - Equipment
- Monitor
  - Building
  - Environment

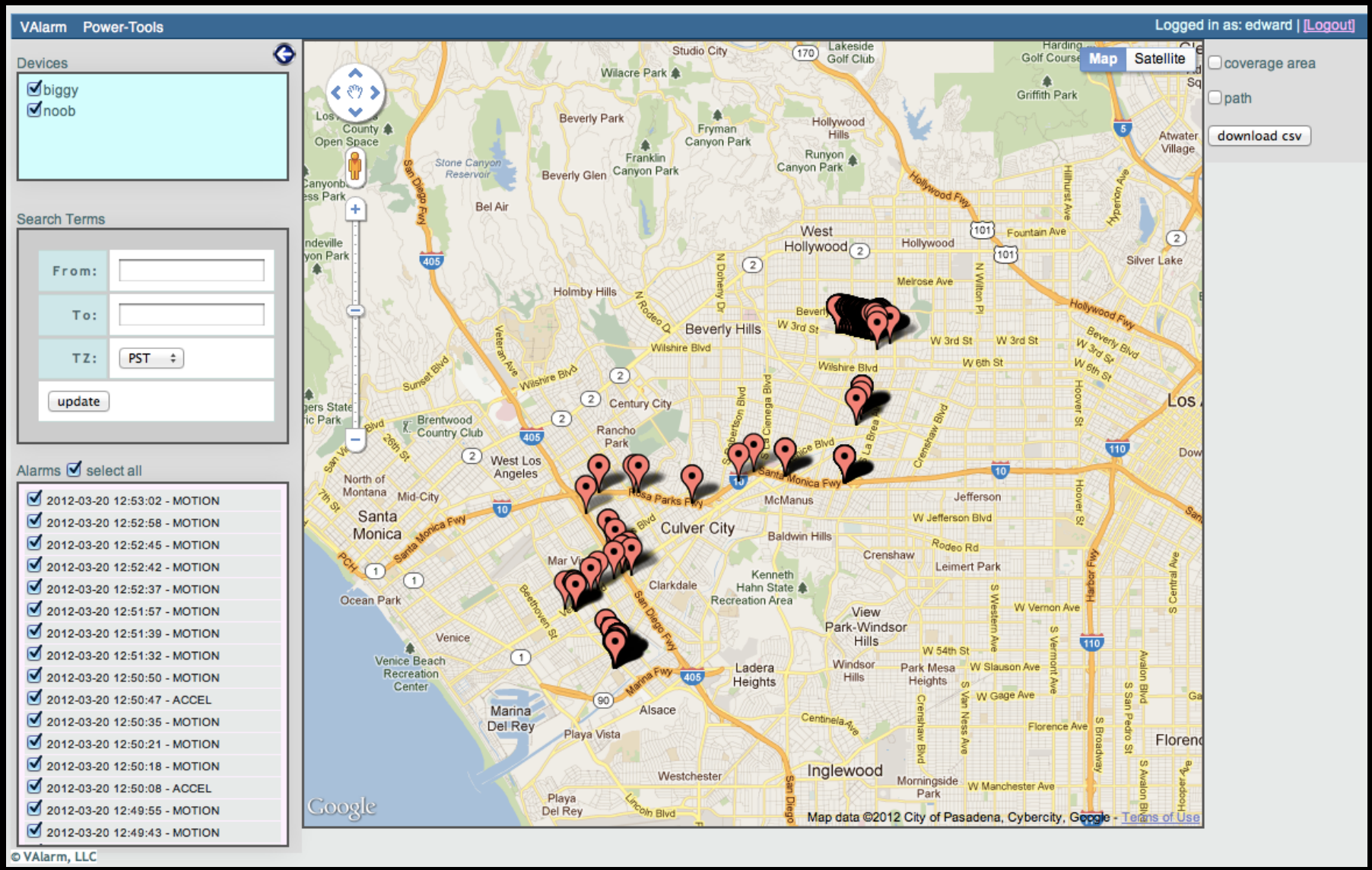
Mobile App



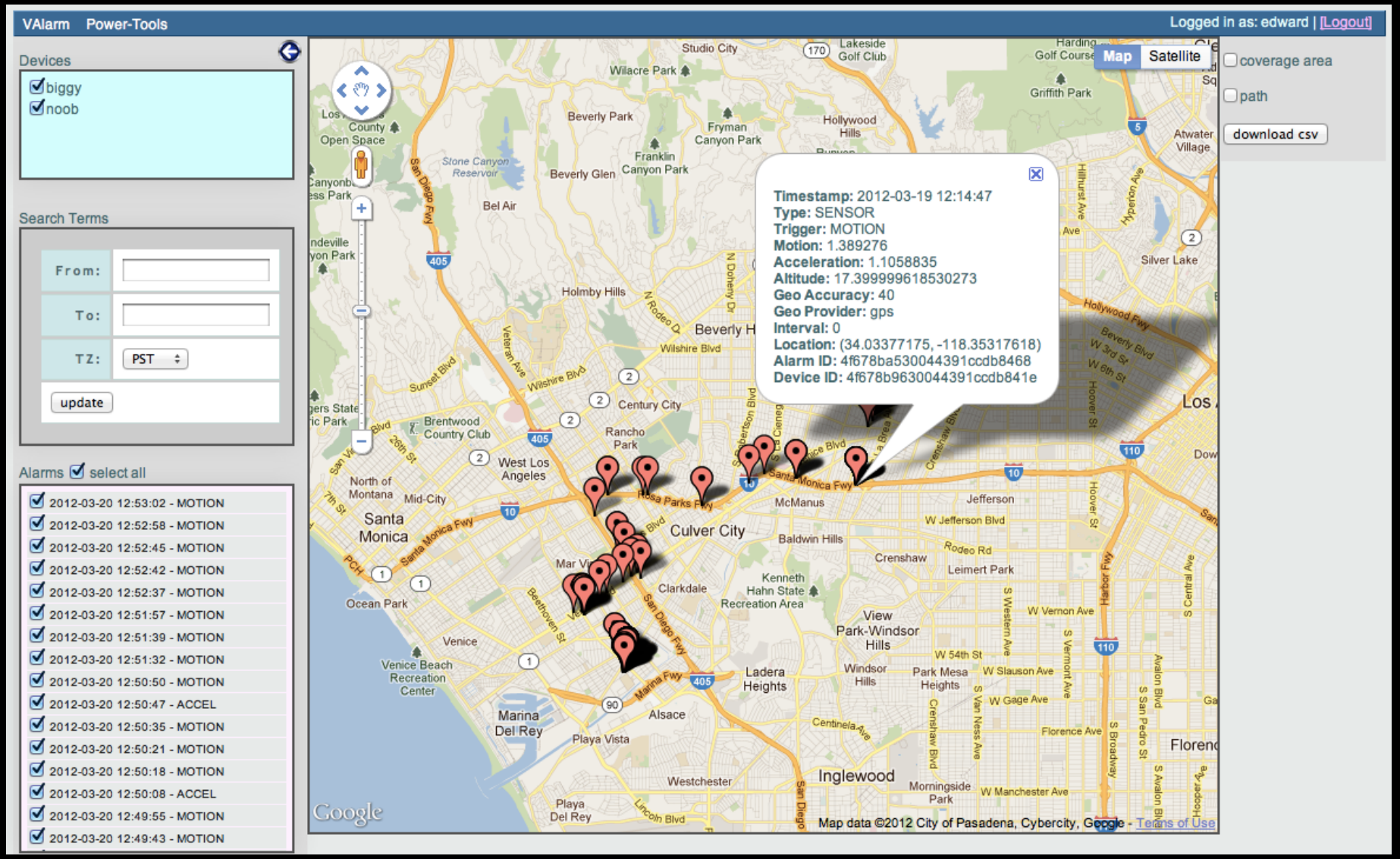
Mobile App


3:25
VAlarm Pro
Settings
Basics
Sensitivity/Triggers
Interval Timer
SMS/Remote Control
Media Recording
GPS/Location
VAlarm.net Services

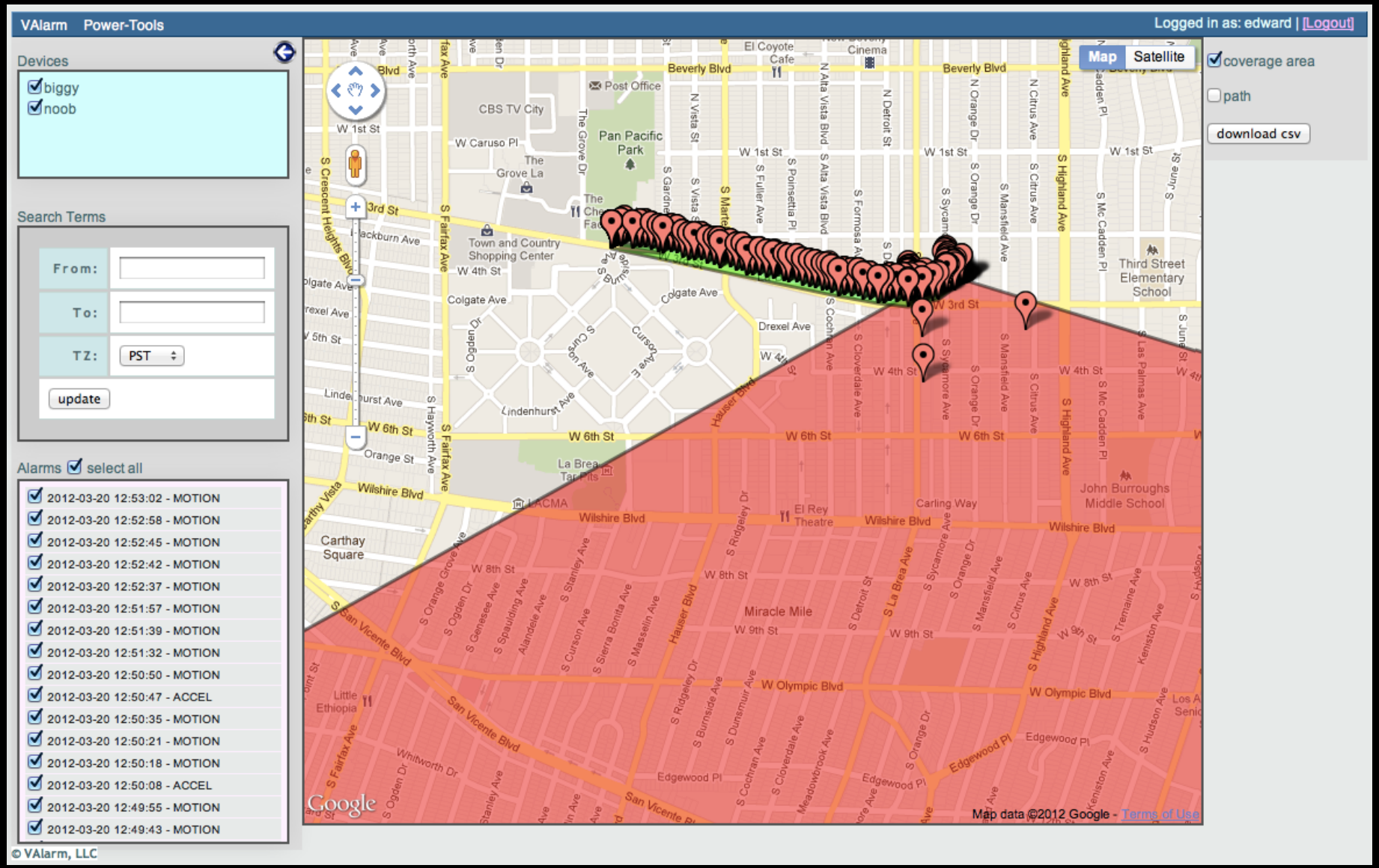
Web Services



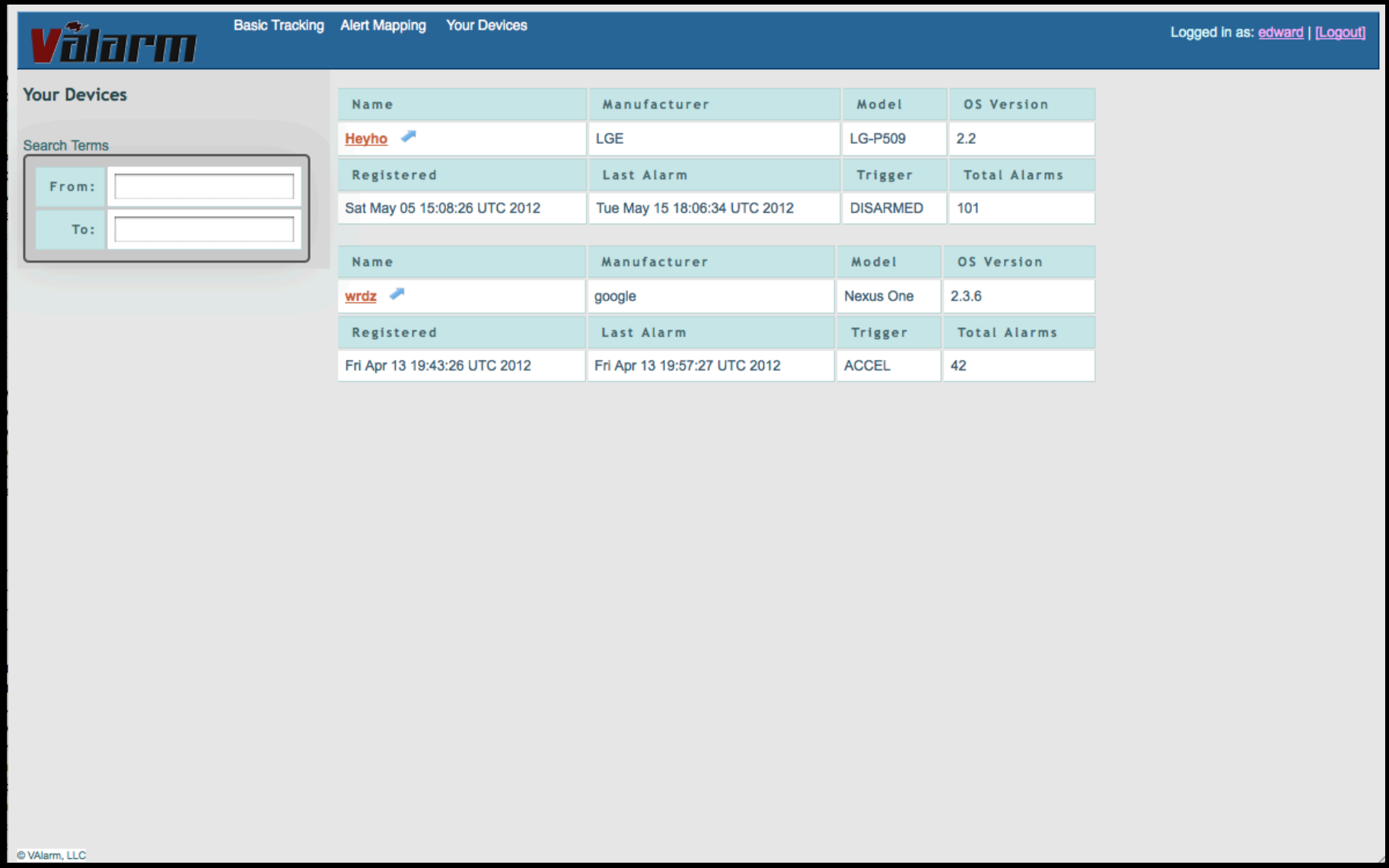
Web Services



Web Services



Web Services



Web Services

VAlarm

Basic Tracking Alert Mapping Your Devices

Logged in as: lorenzo | [Logout]

Device View

Time Period Search

From: 2011-12-15 00:00

To:

Plot Graph of All Sensors

Plot Graph of Motion Sensor

Plot Graph of Shock Sensor

Plot Graph of Audio Sensor

Name	Manufacturer	Model	OS Version
lifegood	LGE	LG-P509	2.2
Registered	**Last Alarm**	**Trigger**	**Total Alarms**
Tue Apr 10 02:07:08 UTC 2012	Wed Apr 11 03:55:18 UTC 2012		122

Alarm Time	Alarm Type	Trigger	Motion	Acceleration	Audio Peak	Interval	Latitude	Longitude	Geo Accuracy	Geo Provider	Altitude
2012-04-10 20:57:35	SYS_STAT	DISARMED	0.8237588	0.8695059	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:57:11	SENSOR	MOTION	0.8237588	0.8695059	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:57:11	SENSOR	MOTION	0.8237588	0.8695059	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:57:11	SYS_STAT	ARMED	0.78453183	0.7171769	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:57:11	SYS_STAT	ARMED	0.78453183	0.7171769	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:57:11	SYS_STAT	ARMED	0.78453183	0.7171769	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:55:18	SYS_STAT	DISARMED	0.78453183	0.7171769	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:55:04	SENSOR	MOTION	0.78453183	0.7171769	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:31:42	SENSOR	ACCEL	-7.207888	2.041931	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:30:49	SENSOR	MOTION	3.2950344	0.8794568	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:30:19	SENSOR	MOTION	2.3732095	0.5028939	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:29:18	SENSOR	MOTION	1.9613297	0.685905	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568
2012-04-10 20:28:48	SENSOR	ACCEL	-5.7761164	1.4714859	0	0	34.41830454	-119.8473193	14	gps	-7.599999904632568

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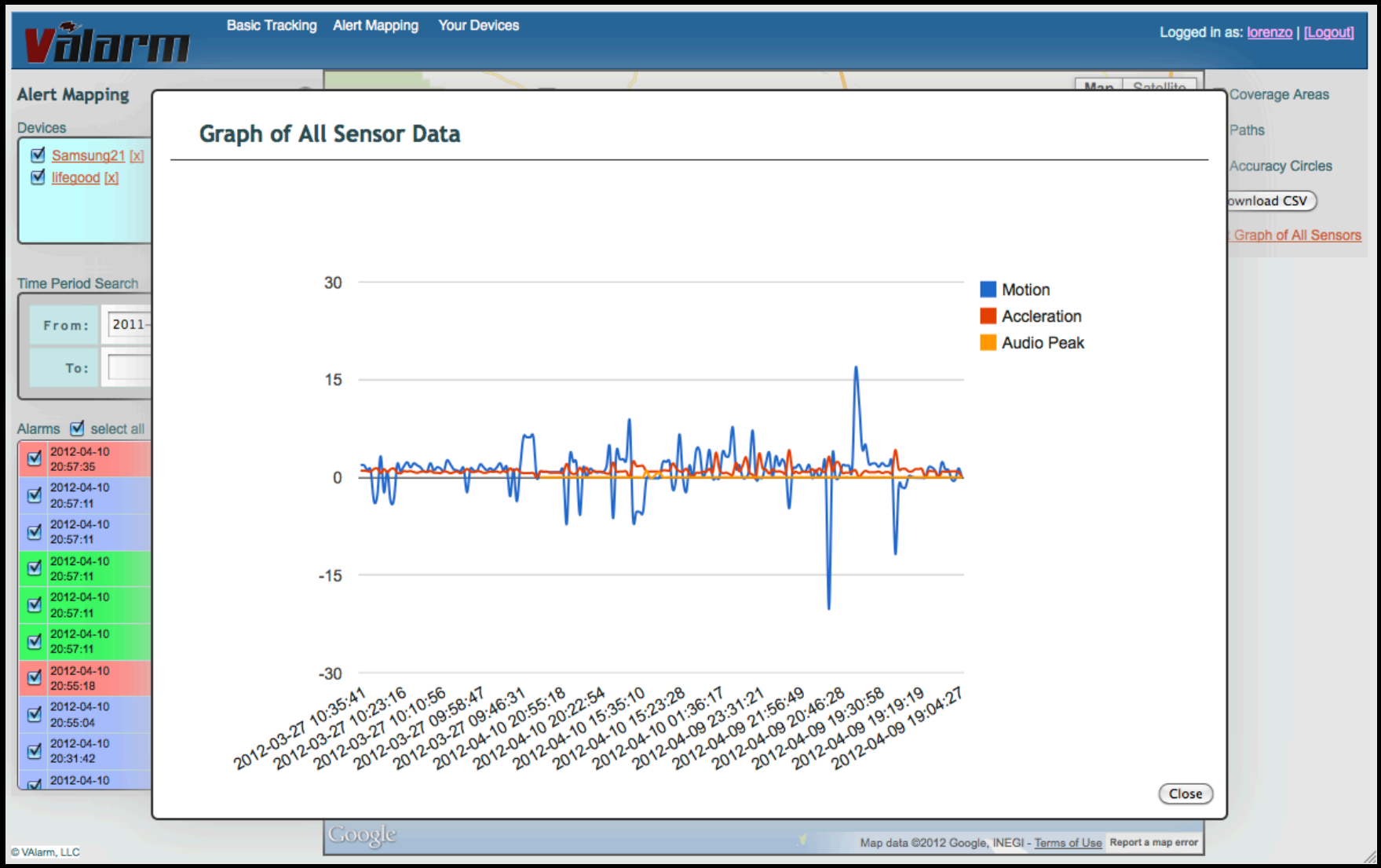
Web Services



Future

- Research
  - Transportation
  - Social
  - Environmental
- Municipal
- Consumer