

קבוצת עבודה הרכב האוטונומי: אתגר הסייבר

דביר רזניק
מנהל השיווק, פתרונות סייבר סקוריתי

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CONNECTED CAR



Navigation, Multimedia, Connectivity, Telematics, Safety & Security Solutions

LIFESTYLE AUDIO



Premium Branded Audio products for use at home, in the car and on the go

PROFESSIONAL SOLUTIONS



Audio, Lighting, Video Switching and Enterprise Automation for Entertainment and Enterprises

CONNECTED SERVICES



Cloud, Mobility and Analytics Software Solutions & OTA update technologies for Automotive, Mobile and Enterprises

LTM Revenue \$3,018M
LTM EBITDA 13.7%

LTM Revenue* \$2,023M
LTM EBITDA 14.7%

LTM Revenue* \$1,013M
LTM EBITDA 13.2%

LTM Revenue* \$682M
LTM EBITDA 13.7%

EBITDA is non-GAAP measure and excludes restructuring, non-recurring charges and acquisition-related items. LTM = Last Twelve Months ending March 31, 2016. *Includes intercompany revenues

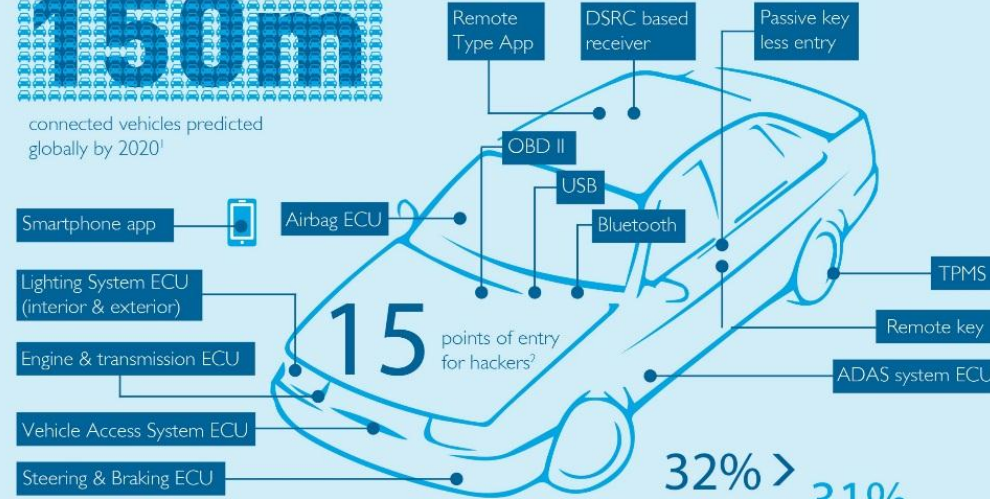
1. 15 ווקטורי כניסה לרכב
2. הרכב האוטונומי: V2X / V2V / IoT
3. אבטחה מהגרעין או מהקליפה
4. תביא לי מערכת סאונד 700 וואט עם 18 רמקולים וסייבר סקיוריטי, בבקשה
5. הגנה על רכבים עתידיים לעומת רכבים "על הכביש"

The Car in 2016 – Connectivity on the Rise



150m

connected vehicles predicted globally by 2020¹



ECUs in today's average car that need protection²



100 million+ lines of software code on a modern car that need protecting, that's more than a Boeing 747⁶



Toyota, Ford and Uber all expect to have self-driving cars by this date. Each will address cybersecurity from the very beginning of development.



In Q1 2016, mobile carriers added more connected cars than mobile phone subscribers to their networks



HARMAN is the industry leader in Automotive Cyber Security solutions for the automotive OEM market. HARMAN has placed significant emphasis on cybersecurity protective measures, including launching the industry's first comprehensive multi-layer security framework for in-car technology design, and acquiring leading cyber security specialist TowerSec in January 2016.

harman.com/security

¹Gartner, ²Frost & Sullivan, ³AutomotiveNews.org, ⁴FireEye, ⁵TechCrunch, ⁶Informationsbearbeitung.net

1. הרכב המחובר



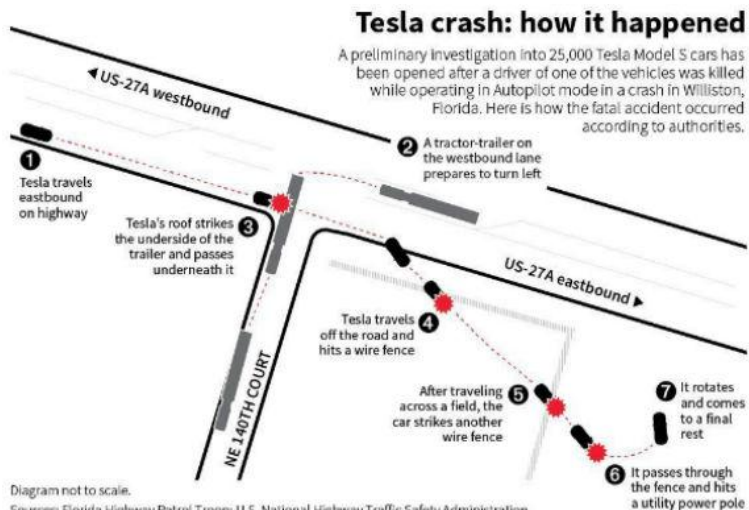
ANDY GREENBERG SECURITY 08.10.16 4:29 PM

A NEW WIRELESS HACK CAN UNLOCK 100 MILLION VOLKSWAGENS



2. הרכב האוטונומי – חיישנים, IOT, V2X

ההרוג הראשון ברכב אוטונומי – ג'ושוע בראון (40)



2. הרכב האוטונומי – חיישנים, IOT, V2X

A **false positive**, commonly called a "false alarm", is a result that indicates a given condition has been fulfilled, when it actually has not been fulfilled (i.e "crying wolf")

A **false negative**, is where a test result indicates that a condition failed, while it actually was successful. A common example is a guilty prisoner freed from jail.

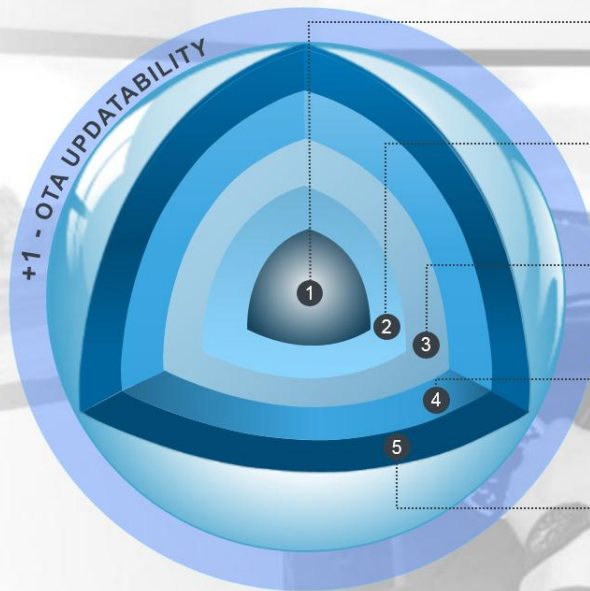
ANDY GREENBERG SECURITY 08.04.16 9:00 AM

HACKERS FOOL TESLA S'S AUTOPILOT TO HIDE AND SPOOF OBSTACLES



SECURITY IN DEPTH

5+1 CYBERSECURITY ARCHITECTURE



1. SECURE HW PLATFORM

TAMPER RESISTANCE

2. HYPERVISOR

DOMAIN SEPARATION

3. OS ACCESS CONTROL

AUTHORIZATION POLICY

4. APPLICATION SANDBOXING

APPLICATION ISOLATION

5. NETWORK PROTECTION

ECUSHIELD & TCUSHIELD

3. אבטחה מהשכבה הכי פנימית



4. כוחות השוק – רגולציה, צרכנים ומוניטין



המוניטין של יצרני הרכב



הדרישות של הצרכנים

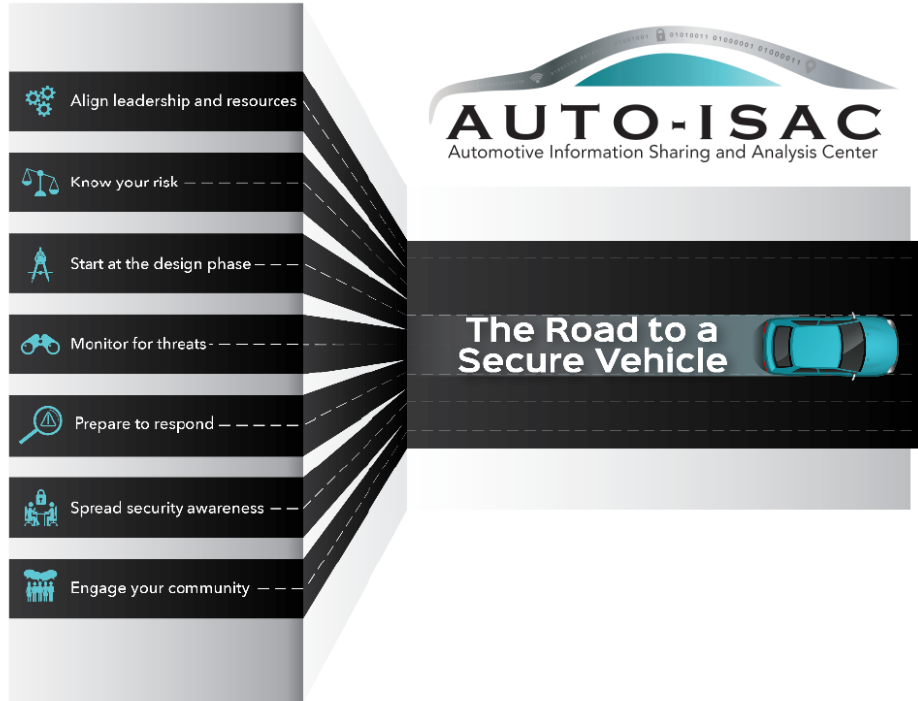


רגולציה וממשל

New rules of the road for self-driving cars have just been released

The White House vs. robot cars

by Andrew J. Hawkins | @andyjayhawk | Sep 19, 2016, 8:00pm EDT



4. כוחות השוק – רגולציה, צרכנים ומוניטין



בלייד ראנר 2049





תודה רבה!



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