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B.Y.O.D. GNSS MEETS MOBILE MAPPING



Unlocking Field Data Collection: BYOD GNSS Meets Mobile Mapping

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&

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Owner & CEO, Apglos

AGENDA

Legacy GNSS History

Current GNSS Trends / Bring your own device

Democratization of GNSS (Com moditization)

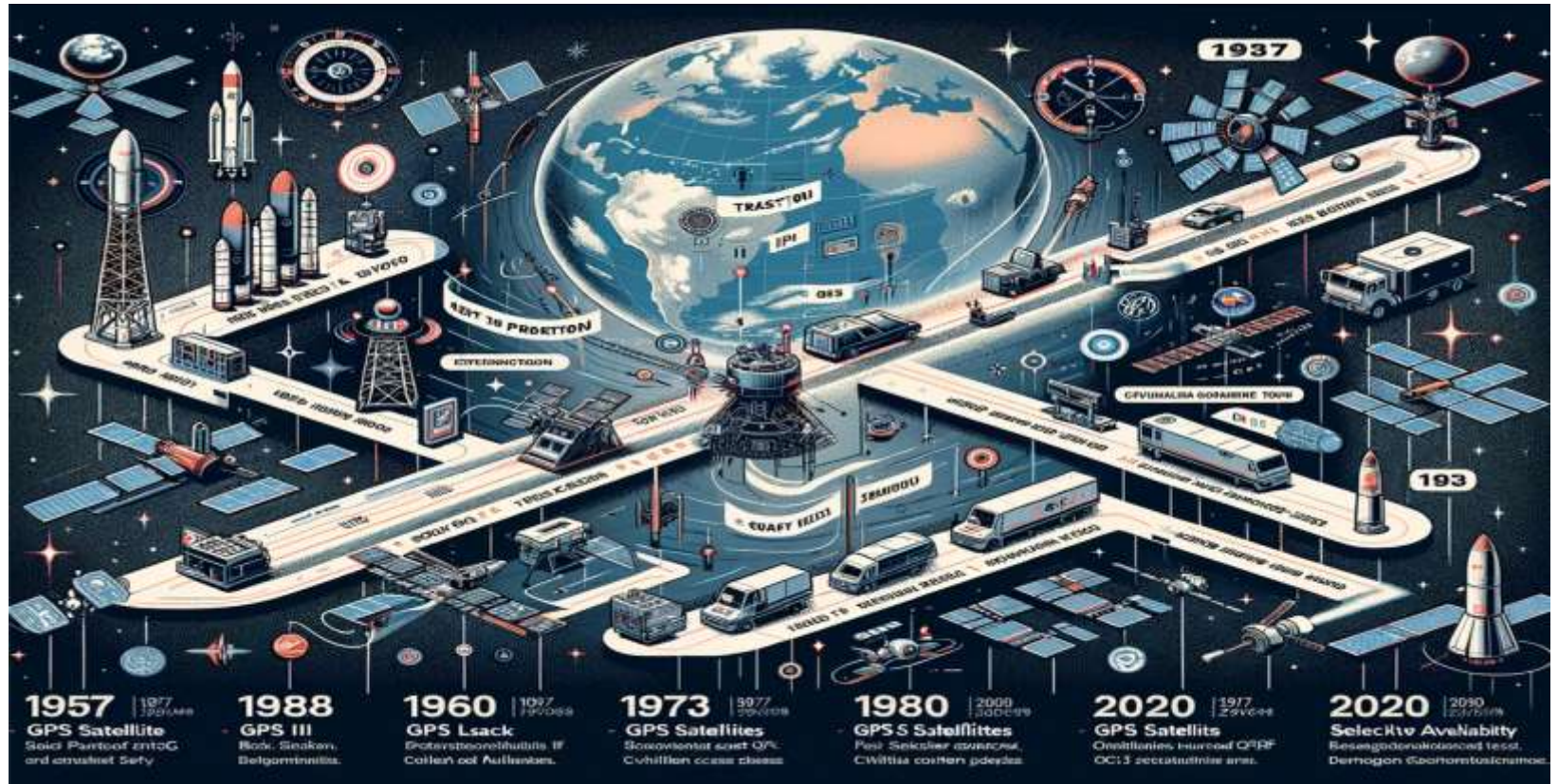
The Future – Equitable & Affordable Mapping

Bad Elf & Apglos Survey Wizard Solution

PW INFRA Case Study



LEGACY GLOBAL POSITIONING HISTORY



LEGACY GLOBAL POSITIONING HISTORY



1957 – Sputnik 1 Launch

1960 – US Navy Transit System

1978 – First GPS Satellite Launch (USA)

1982 – First GLONASS Satellite Launch (Russian)

1983 – First Civilian Access to GPS Permitted

2000 – First BeiDou Satellite Launch (China)

2005 – First Galileo Satellite Launch (Europe)

2010 – QZSS Launch (Japan)

2013 – NavIC Launch (India)

LEGACY GLOBAL POSITIONING HISTORY



Very expensive

Hard to use and complicated (advanced training required)

Closed software/app ecosystems

Large and heavy

Unreliable accuracy

Base & rover setups

Backpack setups

Post-processing workflows

PDOP and satellite issues



CURRENT GNSS TRENDS



Real-time Kinematic (RTK) Systems

Cheaper, faster, and smaller

Cell phone / tablets / other smart devices

The trajectory towards GPS product commoditization

The democratization of GNSS

BYOD



CURRENT GNSS TRENDS



BYOD:

“the concept of using Bring Your Own Device (BYOD) policies in conjunction with GPS (Global Positioning System) technologies. This approach allows individuals to use their personal smartphones, tablets, or other mobile devices for tasks that require GPS functionality, which can be particularly useful in various professional fields such as surveying, field data collection, and fleet management.”

B.Y.O.D



GPS World Article

Surveying and BYOD: Yes, you can use your smartphone

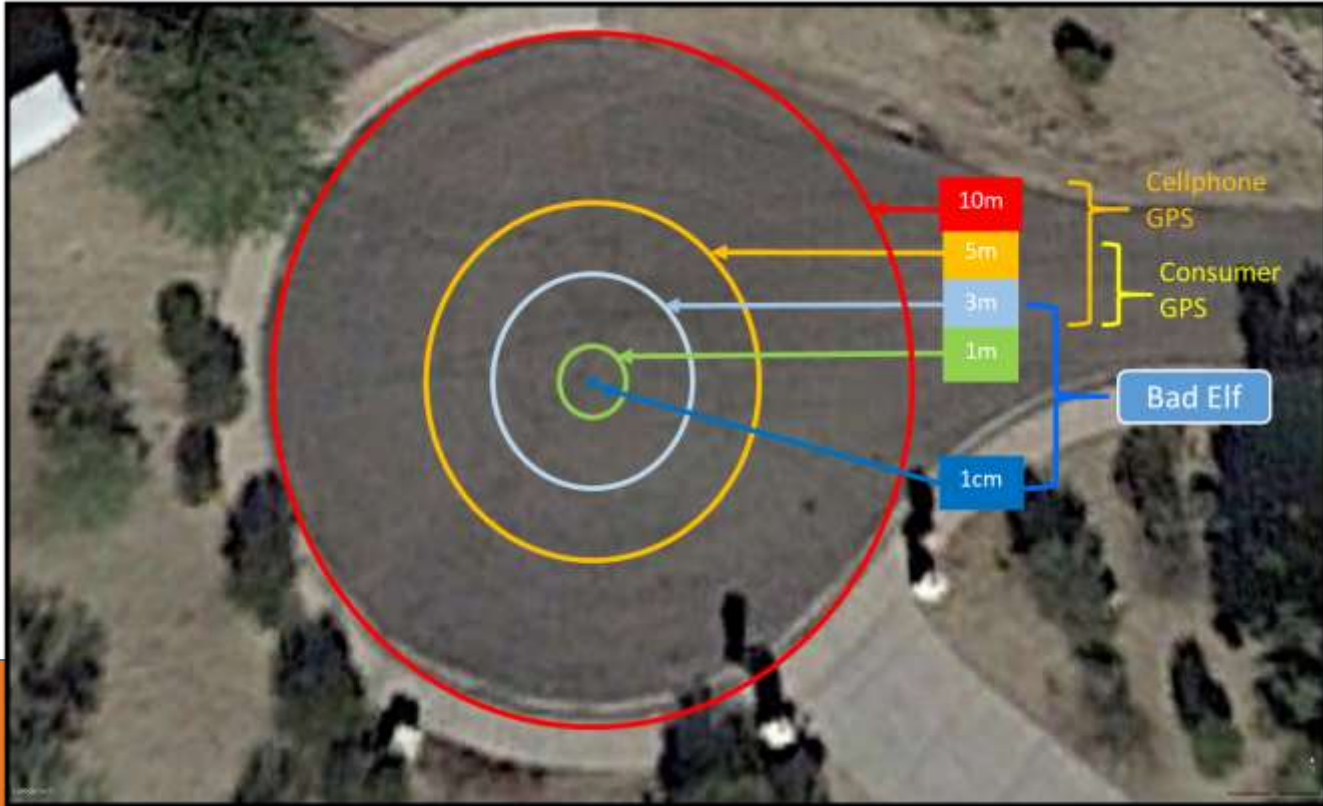
May 16, 2019 - By **Tim Burch**

Est. reading time: 9:30



BRING YOUR OWN DEVICE (BYOD) is not just an industry buzzword. It can change the way professional surveyors work every day. The idea of using a smartphone or tablet instead of a dedicated device is appealing. But is it good enough?

CONSUMER / GIS / SURVEY-GRADE



THE FUTURE - EQUITABLE AND AFFORDABLE



Moore's Law - states that the number of transistors on a microchip doubles approximately every two years, resulting in a corresponding increase in computational power.

Use the device in your pocket!

Real-time GIS integration w/ dashboards, etc

No degrees needed!

The Geospatial Moment!



THE BAD ELF & APGLOS SURVEY WIZARD SOLUTION



Bad Elf BYOD GNSS

+

Apglos Survey Wizard 3rd Party Land Surveying & GIS App

=

Low cost, easy to use, equitable solution for anyone who wants to map around the world



OUR TECHNOLOGY



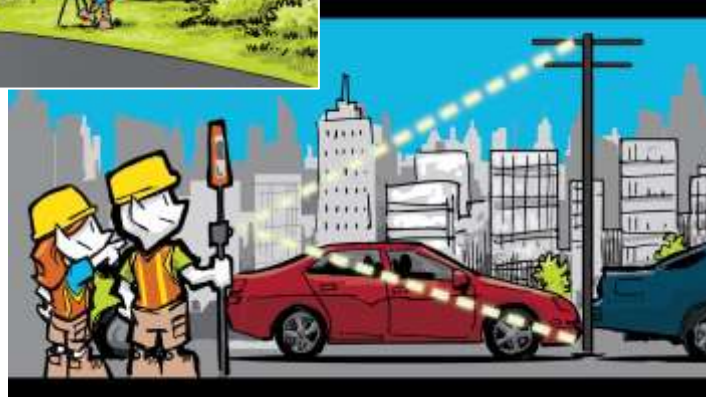
Bad Elf Flex

Type	Accuracy (h)	Pros
SBAS	30-70 cm	Included
L-Band	4-12 cm	Global
RTK	~1 cm	survey-grade via NTRIP
Base/Rover	~1 cm	survey-grade via radio

Bad Elf

Type	Accuracy (h)	Pros
STANDARD	150 cm	Price!
SBAS	1 m	Included
RTK	25 cm	sub-foot accuracy via NTRIP

ADVANCED FUNCTIONALITY



Base/Rover
Mapping

Laser Offset

Drone



ADVANCED FUNCTIONALITY



Base/Rover
Drone Mapping

Laser Offset



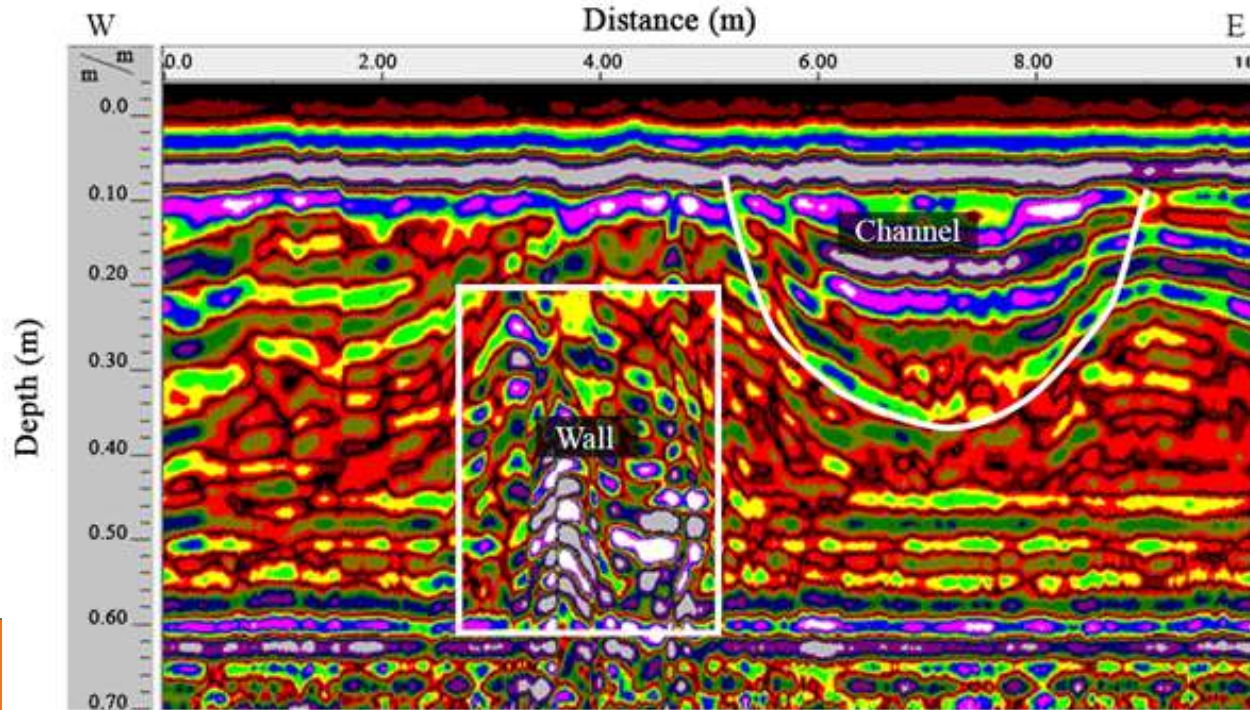
ADVANCED FUNCTIONALITY



Ground Penetrating Radar (GPR)



ADVANCED FUNCTIONALITY



Ground Penetrating Radar (GPR)



APGLOS SURVEY WIZARD



Compatibility of this land survey app with GNSS receivers

Apglos Survey Wizard uses Bluetooth/Wi-Fi to communicate with GNSS receivers. Also in certain cases this land survey app uses USB. In both ways Apglos Survey Wizards reads the NMEA-0183 (GGA and GST) strings from the GNSS receiver to get the exact position. This means:

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Uw kracht in de infra



Are we going to build something beautiful together?

Don't talk, just polish

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Visit our websites at:

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