

Satellite broadband for disaster management, and sustainable development

Sathya Narayanaswamy
Vice President, India
Viasat

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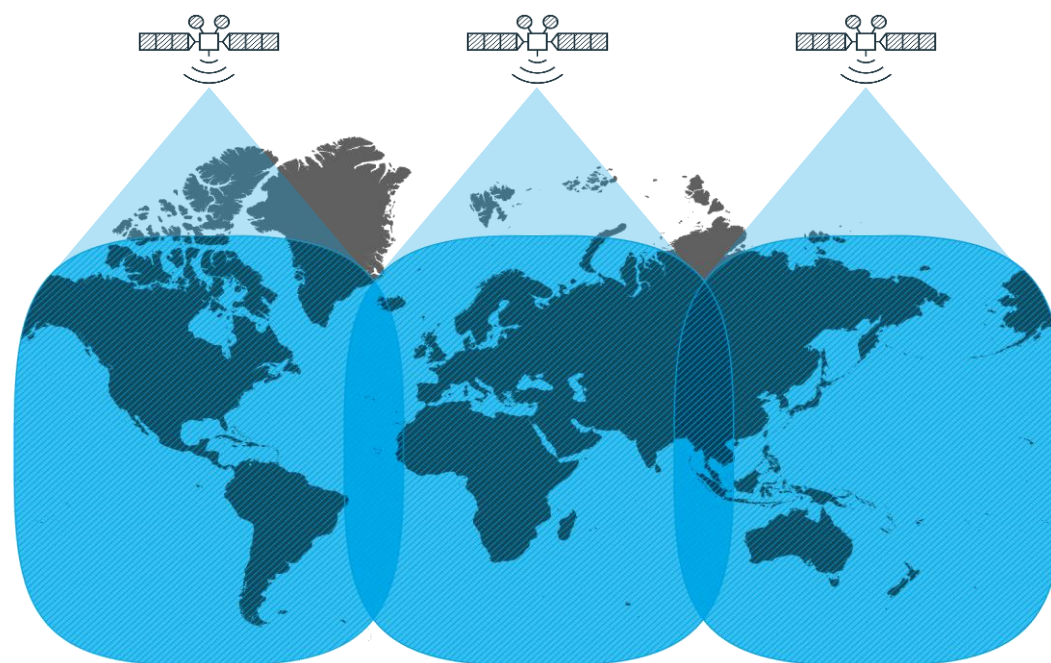
Viasat is a global communications company that believes everyone and everything can be connected

Coverage Evolution with Entire Ka-Band

ViaSat-1 & 2



ViaSat-3



Fast connections for consumers and businesses



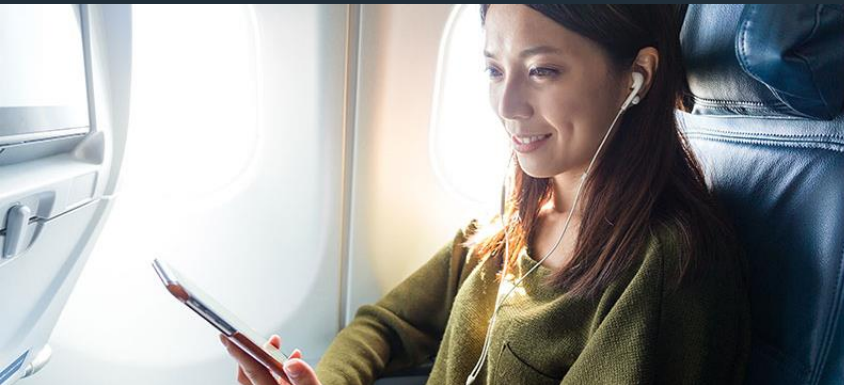
Unlimited home internet plans mean unlimited possibilities



Business internet and Wi-Fi for hard-to-serve locations



Connecting the unconnected to affordable high-speed internet



The best Wi-Fi in the sky gives every passenger freedom to stream



Stay productive and entertained on private aircraft



Fast, reliable internet for cruise ships, pleasure craft, and other vessels

Fast connections for consumers and businesses



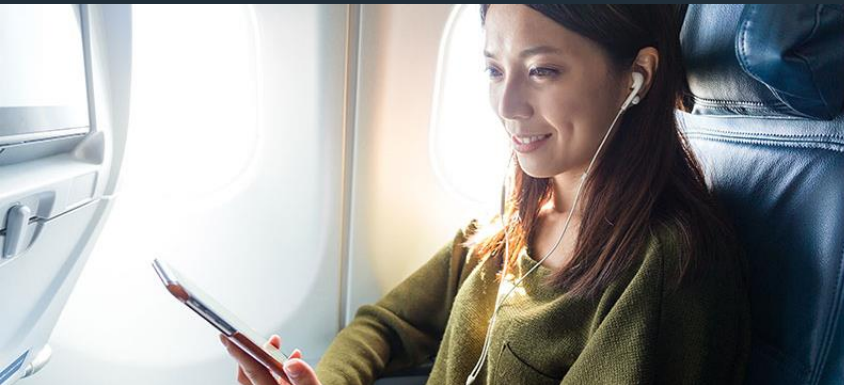
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Ka-Band Satellite-Powered Community Wi-Fi

- Wi-Fi hotspots powered by Ka-Band satellite serve entire communities
- Deployable in hours
- Customers use their existing phones and tablets
- 2,000+ communities and 1,000,000+ people covered
- Adding 100s of communities per month
- Expanding around the world



Community WiFi

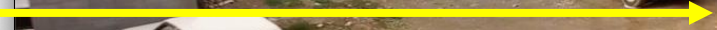


Community WiFi

WiFi Mesh



Satellite Broadband



Community WiFi



Satellite Broadband

Viasat Teams with Facebook

Accelerating rollout of sustainable Community WiFi

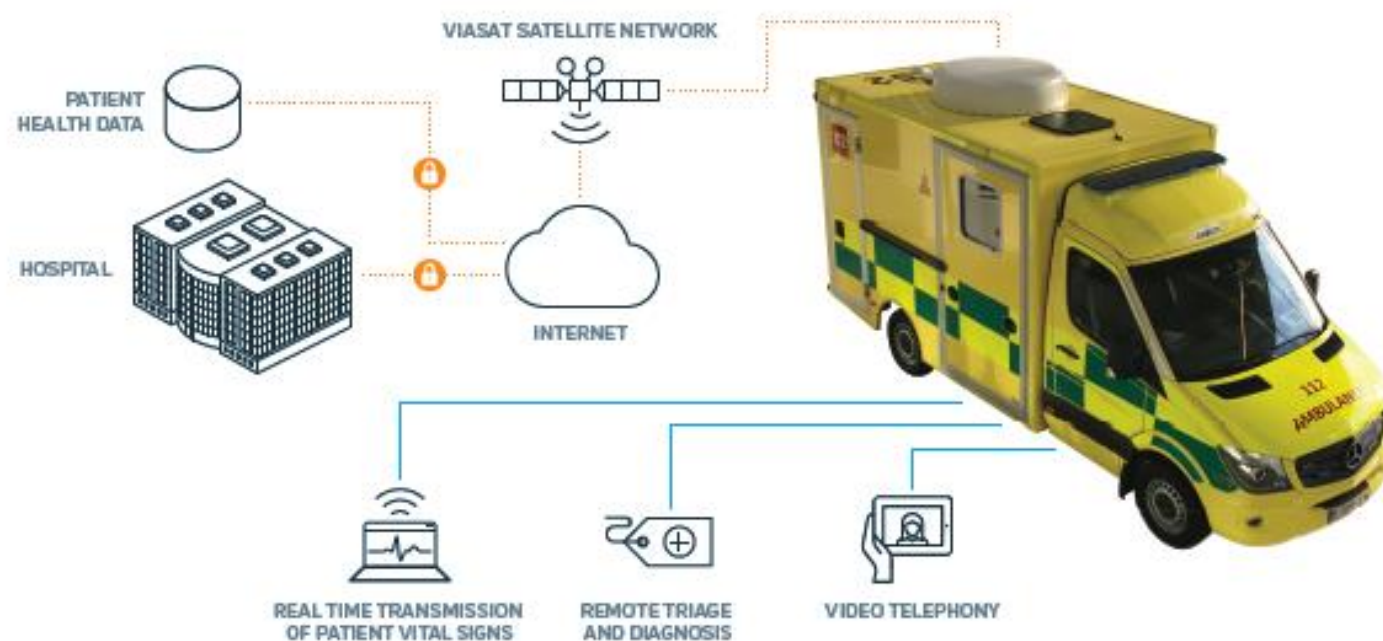
- > Facebook helping identify unconnected and poorly connect communities to reach more quickly
- > Cost and accessibility are main drivers
- > Traditional internet providers focus on densely populated areas
- > Satellite is a better solution in many areas
- > New high-capacity satellites joined with local wifi networks/splitting terminal use among many users
- > More capacity + lower bandwidth cost = service to all
- > Business driven models = sustainability



Telemedicine

Every Second Counts: continuous connectivity in urban and rural areas

- > Critical Care: fast transfer of patient medical data to doctors
- > Remote diagnosis: enabling triage on the way to medical centers
- > Video telephony: connecting first responders with doctors in real time



Brazil: Brumadinho Dam Disaster

Countrywide coverage: existing network and can be deployed instantly

- > Because satellite broadband already covers *all* of Brazil, quickly deploying site-specific communications is easy
- > Mounted antennas on any fixed surface they could find
 - Concrete blocks
 - Office buildings
 - Cable reels
 - Mud-mired cars
- > Networks available across first responder communities (e.g., defense, police, fire, medical)



Puerto Rico: Hurricane Maria

Critical communications: enabling coordination of repair and support missions

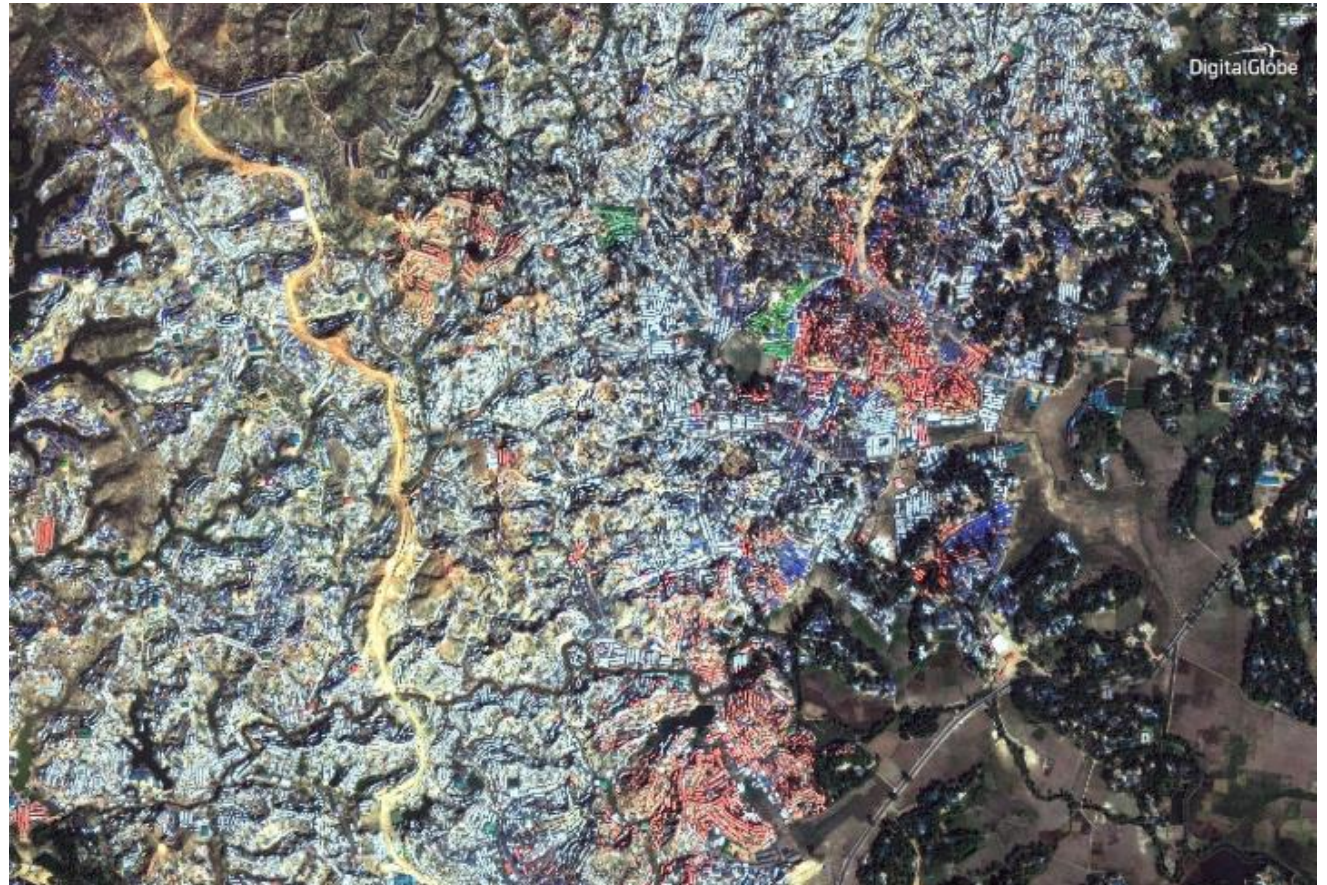
- > Satellite is the the 'go to' technology for global disasters
- > Communications when nothing else is available
- > Supporting first responders with reliable connectivity
- > Instant local networks



NGOs Using Satellite Imagery and Comms for Refugees

Monitoring and supporting refugee populations

- Case Study: Kutapalong Refugee Camp, Bangladesh (December 2017)
- Number of forcibly displaced people is increasing
- Satellite mapping information can reduce amount of staff
- Ensures better access for support services (e.g., water, waste collection)
- Ability to monitor changes



Call to action from government policy makers

- > Satellite broadband is essential for disaster preparedness
 - Quick to setup, when coverage is enabled
 - Less susceptible to damage than terrestrial infrastructure
- > Policies for satellite broadband
 - Allocate and reserve spectrum for satellite (eg. 28GHz)
 - Rapid licensing and permissions for providing coverage
 - Inclusion in emergency preparedness planning



- > Satellite broadband also helps achieve the sustainable development goals

Thank you

