



# Satellite Solutions for Commercial Marine

BROADBAND DATA



COMMUNICATIONS



TELEVISION



## Global mini-VSAT Broadband<sup>sm</sup> Service

Steven J. Griffin  
Digital Ship U.S. 2009

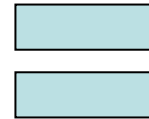
- **Inmarsat revolutionized the maritime industry almost 30 years ago – delivering connectivity to vessels.**
- **New Technologies have entered the game**
  - Fleet Broadband, VSAT, and mini-VSAT
- **Technology is improving however bandwidth consumption growing at even a faster rate!**
  - **Business use**
    - Email, Enterprise Resource Planning (ERP), E-filing of Regulatory Forms, weather charts, etc.
  - **Personal use**
    - Global mobile broadband increasing by 30% YOY
    - HTTP Streaming traffic growing among mobile broadband users by 60% YOY (Allot, Q2 2009 Survey – 150million customers)

# Usage Breakdown

**Crew Usage**



**Business Applications**



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**Visitor / Charter Usage**

***Provide sufficient broadband connectivity at a fixed monthly cost for business applications, while allowing crew members and visitors to also have access to the same broadband network.***

- **Provide vessels with a high quality service at a reasonable fixed monthly cost for business class applications**
- **Offer the availability of surplus bandwidth for unusual events:**
  - Mechanical / Medical Emergency
  - Catastrophic event
  - Streaming video for online trainings
- **Be able to manage the usage of Crew and Visitor's usage.**

- **Incorporate network management tools to enable customers to segregate their broadband use between mission critical business applications and crew / personal internet access**
- **Deliver a COMPLETE end-to-end solution – both hardware and network – in establishing the highest level of customer satisfaction**

KVH<sup>®</sup> INDUSTRIES  
**MINI-VSAT**  
B R O A D B A N D <sup>SM</sup>

# The New Standard for Broadband

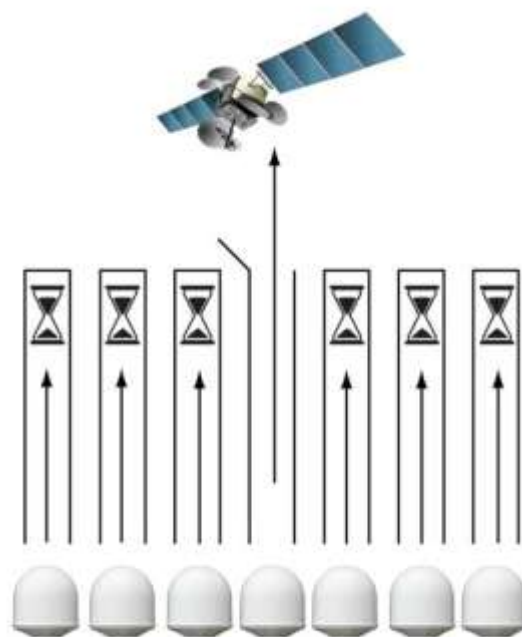


- **KVH's mini-VSAT Broadband service**
  - A fully integrated maritime satellite communications system and service
- **Sophisticated spread spectrum technology**
- **Seamless global network serving maritime and aviation markets**
- **Small, easy to install hardware**
  - 60 cm antenna plus integrated modem and control unit
  - Reduces hardware and installation costs and reduces vessel downtime

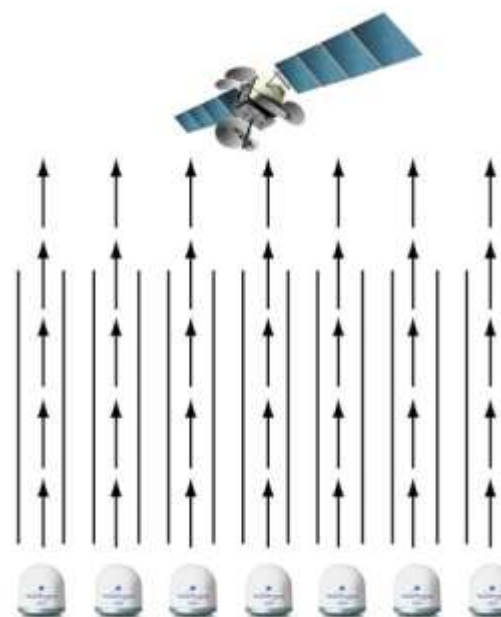


# Spread Spectrum Technology

- Supporting 60 cm antennas while offering faster speeds and significant savings in airtime costs
- Frequency re-use and burst message transmission provides enhanced efficiency resulting in lower airtime costs

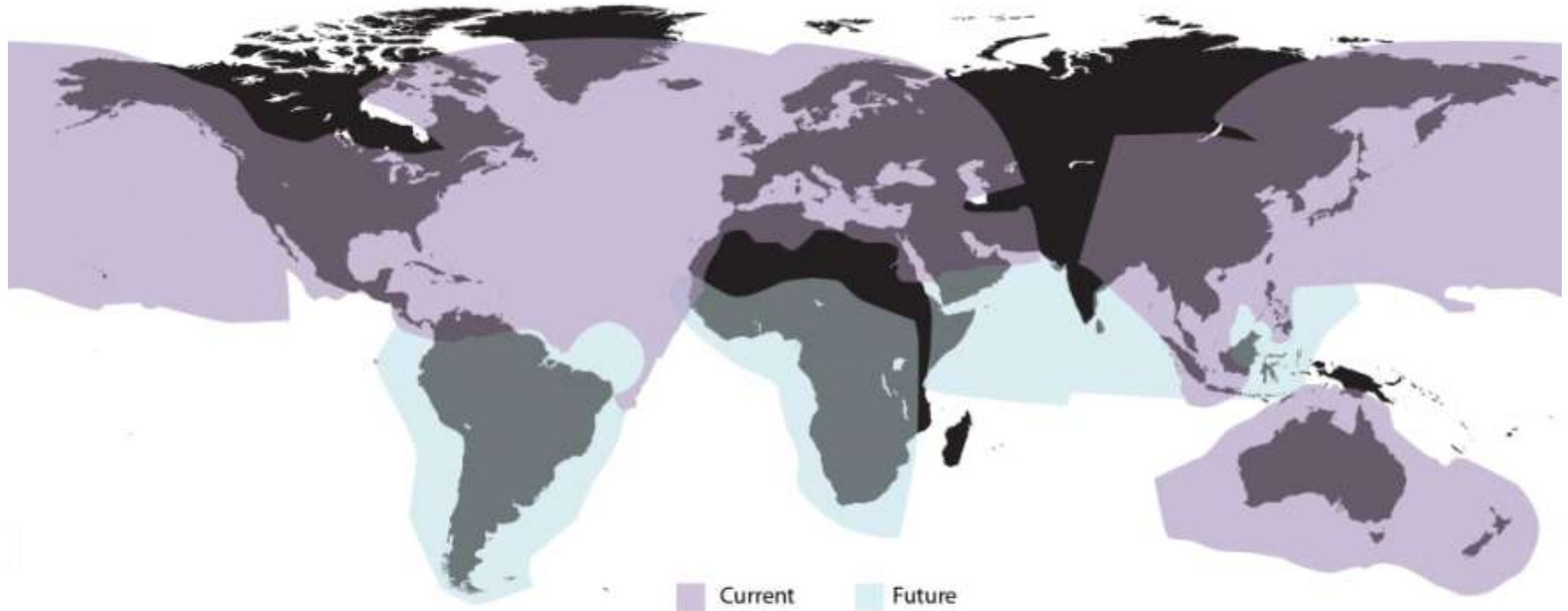


TDMA VSAT Systems



mini-VSAT Broadband Systems

# Global Coverage



*\*This map depicts KVH's expectations for mini-VSAT Broadband's future coverage; actual coverage and availability may vary.*

# TracPhone V7 Overview



- **Small, easy to install hardware**

- 60 cm antenna plus integrated modem and control unit
- 75% smaller than legacy 1.2m VSAT

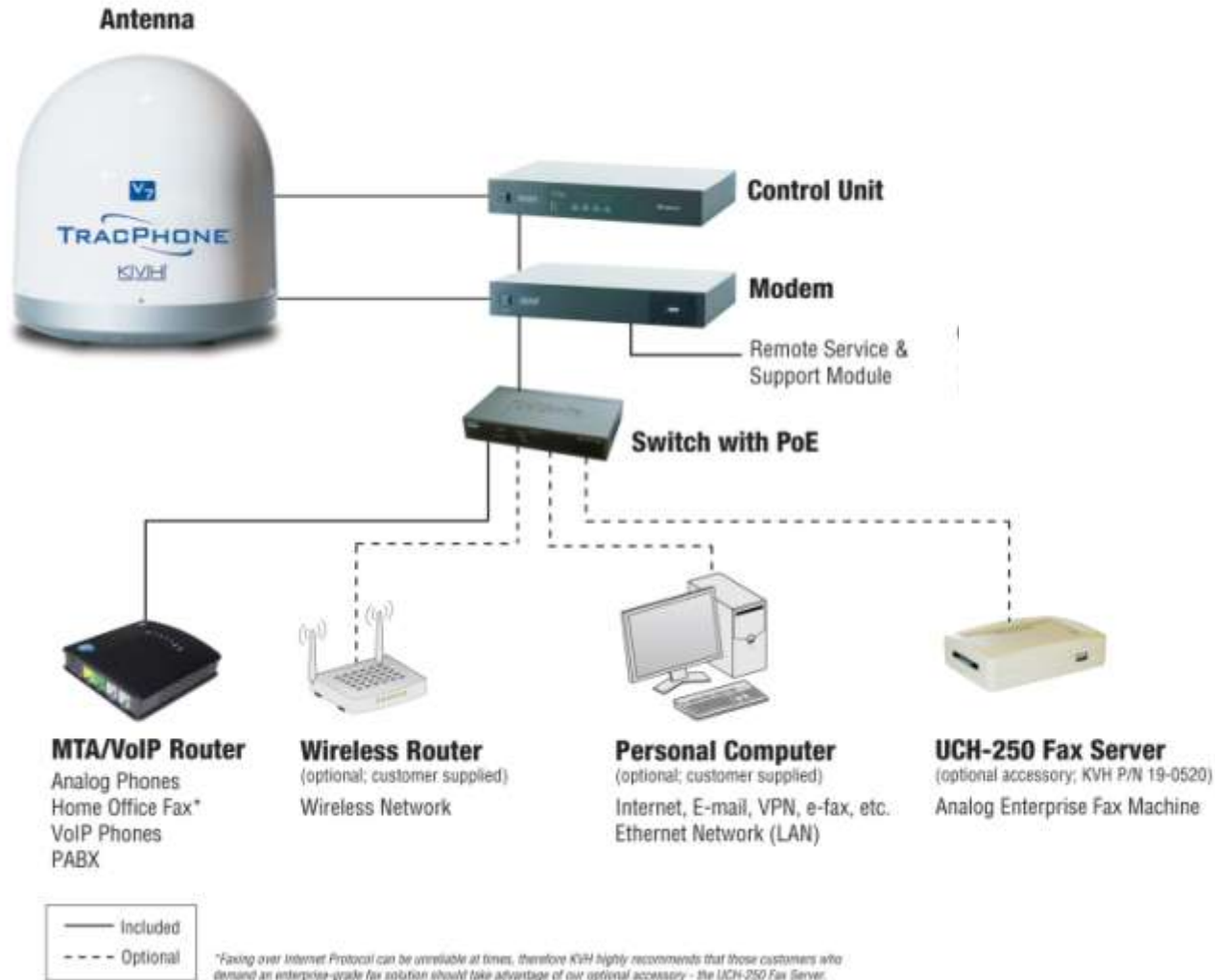
- **Reduced hardware and installation costs**

- No need to modify vessel superstructure
- Easier to find the optimum antenna location
- Affordable leasing options available

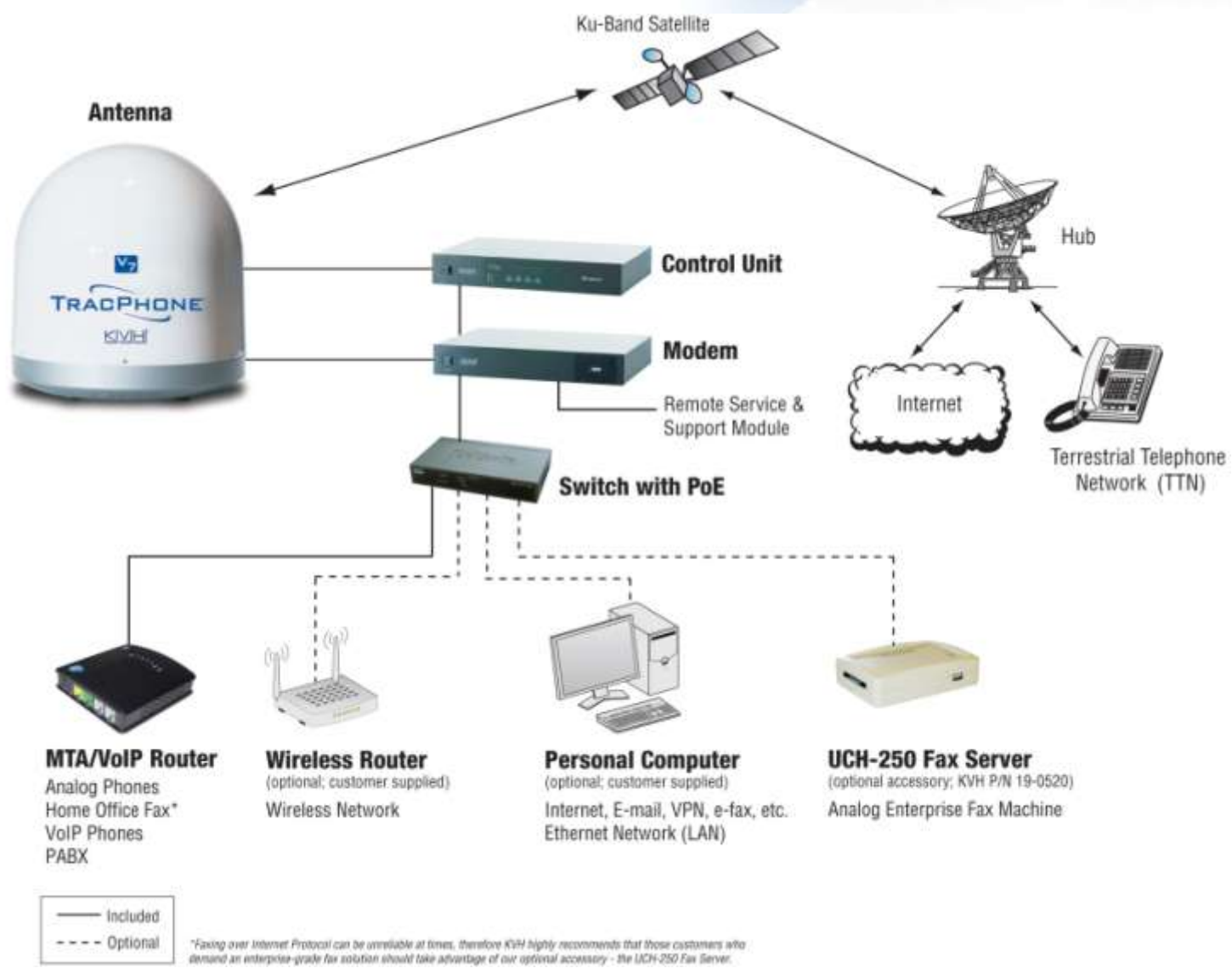
- **Rapid installation and activation reduces vessel downtime**

- Installation can take place while under way
- Due to minimal size and weight a crane is not needed

# Complete Hardware Solution



# Complete End to End Solution



# New Crew Calling System

KVHI



# Picocell Technology

KVH<sup>®</sup>

- **Offers maritime cell phone service via the mini-VSAT Broadband network**
  - Access to affordable cell phone service offshore and around the globe
- **For crew members, passengers, and onboard contractors**
  - Easily use their own cell phones
  - Place and receive calls to any fixed or cellular telephone, anywhere in the world
- **Affordable and convenient communications option**



- **Here at Digital Ship USA!!**
  - Clipper Group
  - USCG
  
- **No longer a new Technology**
  - 500+ systems shipped in under two years
  - Global Support Network
  - Future enhancements
    - MPLS Lines connecting all KVH Hubs
    - Customer Portal Site

# “Test Drive” the TracPhone® V7

KVH

- Free assessment of the cost savings and a custom proposal
- Demo opportunity, if you qualify

With your shipboard communications, **would you like to:**

- Save **85% or more** on airtime  
*- Mowinckel did... find out how!*
- Bring broadband and hardware onboard  
**for only \$1,995**  
*- Find out what Tesla brought onboard!*
- Save time & money;**  
install the antenna while underway  
*- Vedero did... find out how!*

[CLICK HERE TO LEARN MORE!](#)



The image shows a white, dome-shaped TracPhone V7 antenna. It has a blue square logo with a white 'V7' inside, the word 'TRACPHONE' in blue, and the 'KVH' logo at the bottom. The antenna is mounted on a silver base.

KVH

LEADER IN MOBILE BROADBAND

**Come see us upstairs**

**KVH**

**KVH<sup>®</sup>**

**LEADER IN MOBILE  
BROADBAND**