



# Omniglobe Solutions presents Omni-COM

## Mission statement

Omniglobe Solutions Inc. engineers highly reliable, scalable and redundant soft distributed next-generation communication systems for a multitude of Military and Public Safety applications



**C4I Command Center**

[www.omniglobesolutions.ca](http://www.omniglobesolutions.ca)



**Military ATC**

815 Blvd de la Carriere, Gatineau, Quebec



## Omniglobe : Management team

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### **SIVA KUMAR**

**President** – Has held the position of Vice-President with Solacom (Defense & Security) and Alcatel Defense. Previously with General Dynamics Canada, he has extensive experience (20+ years) in defense and security markets.

### **LARRY JOHNSON**

**Board Advisor** – After completing his military career, he served as Senior Vice-President General Dynamics Canada prior to retiring as President, General Dynamics United Kingdom.

### **MICHAEL CULLEN**

**Board Advisor** – Enjoyed a 30 year career with General Dynamics Canada, the last 15 of which were served as Vice-President & CFO.

### **BRYAN RIGHETTI**

**Board Advisor** – Prior to joining Omniglobe Solutions, retired Col Bryan Righetti was Vice-President for Business Development at Nanowave Technologies Inc.



## Current challenges

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**The current products used** are based heavily on hardware platforms. The hardware platforms are either

- Proprietary based chassis that's hosts VoIP cards, digital cards, analog cards, encoders, mother board and processing board (H100 or H1100 based). These cards process and mix signals based on client server architecture.

or

- Compact PCI based chassis. The chassis carries the same number of cards as above.

Both the above platform's further needs dedicated server.

For redundancy one needs to duplicate the above platforms and server.

### **Drawback with the above mentioned architecture**

- Excessive form factor that is not suitable for small tactical or deployable centers
- Power consumption, heat generation, electromagnetic interferences, etc.
- Scalability and redundancy is limited by hardware
- Further the user screen is based on old tool sets and requires many actions to perform one function
- Increased cost due to hardware (Capital and Logistics)



# OmniGlobe's Omni-COM

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Omni-COM is a software based solution that resides in a computer in static or mobile operational centers. The computer interfaces to external world. The collected information (voice, data, video) is processed and mixed in the same computer and presented in a single GUI to an operator to manage the information.

- For Defense and Public Safety communication, the software system interfaces to military radios, public safety radios, land-lines and sensors (for videos) and allows an operator (based on logon-profile setting) to perform actions.
  
- Omni-COM system is suitable for static, tactical and mobile operations.
  - # Eliminates stove piped systems
  - # Interfaces and integrates radio, land-line, video and data
  - # Minimizes form factor and presents information on a single Graphical User Screen
  - # Very high scalability and redundancy (since it is not hardware based)
  - # No power consumption, heat generation, electromagnetic interferences, that are associated with hardware based design
  - # Integrated video with real time annotation
  - # Enables future capabilities now (real time radio interfaces for Public safety E-Health)
  - # Drastic reduction in cost (Capital and Logistics)



# Current System Architectures



Operator workstation



Multiplexer



2 port analog  
Radio interface



VoIP Module



Video to  
Ethernet converter



H110 Processing



Server



# With Omni-COM



Operator workstation



Multiplexer



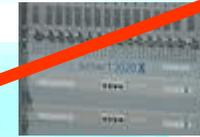
2 port analog  
Radio interface



VoIP Module



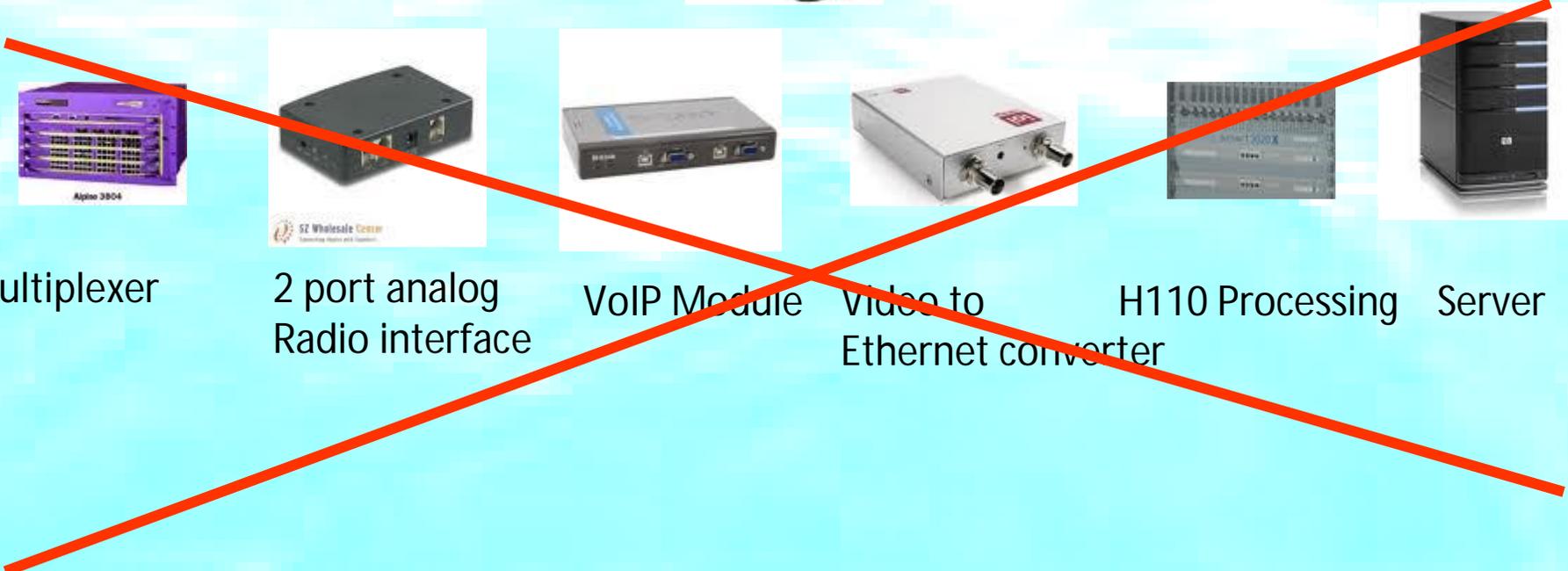
Video to  
Ethernet converter



H110 Processing



Server





## High level Omni-COM view

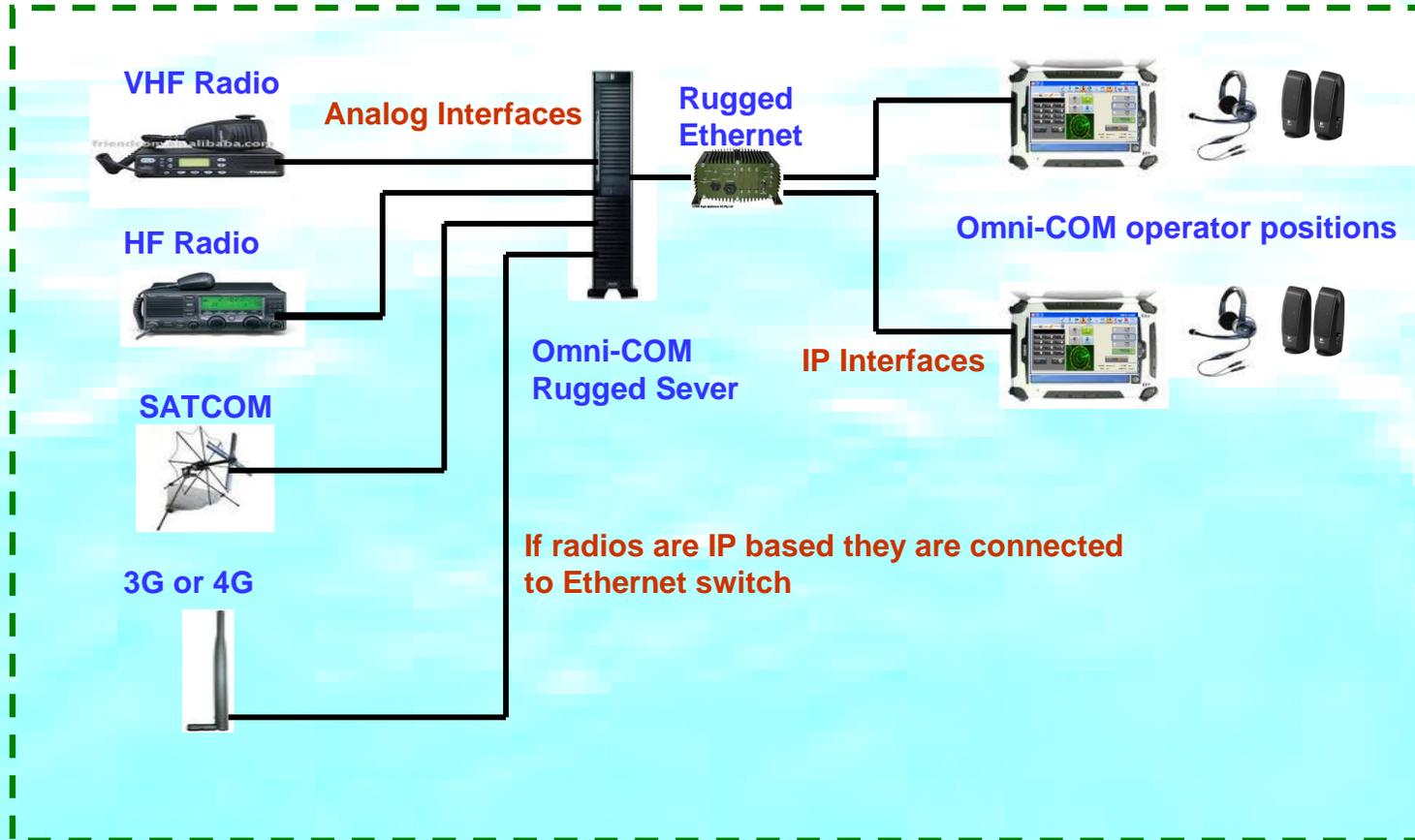
Omni-COM interfaces to radios and landlines. Any operator from any position, based on login profile can access any assets. The system includes integrated record and playback. The solution is based on pure software based architecture (other vendors are hardware based). Our solution not only provides more capabilities compared to hardware based vendors but also is half the cost (capital and logistics)



**Plus backward compatibility to interface with older analog and digital systems**



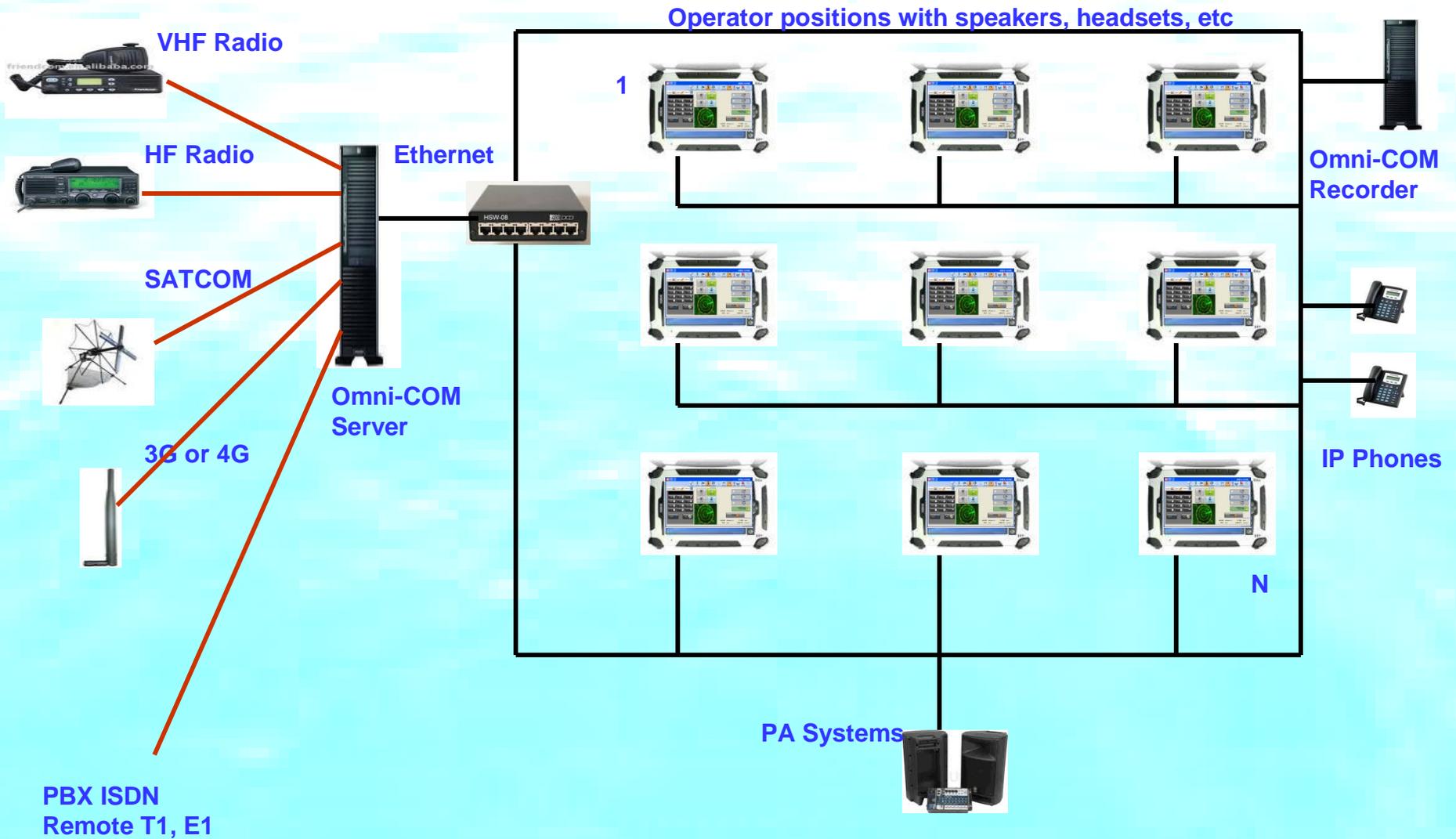
# Omni-COM for Deployable Operational Center (DOC) : Block diagram



The Omni-COM server is redundant. IP connections from Ethernet switch to Operator computers are dual to provide redundancy



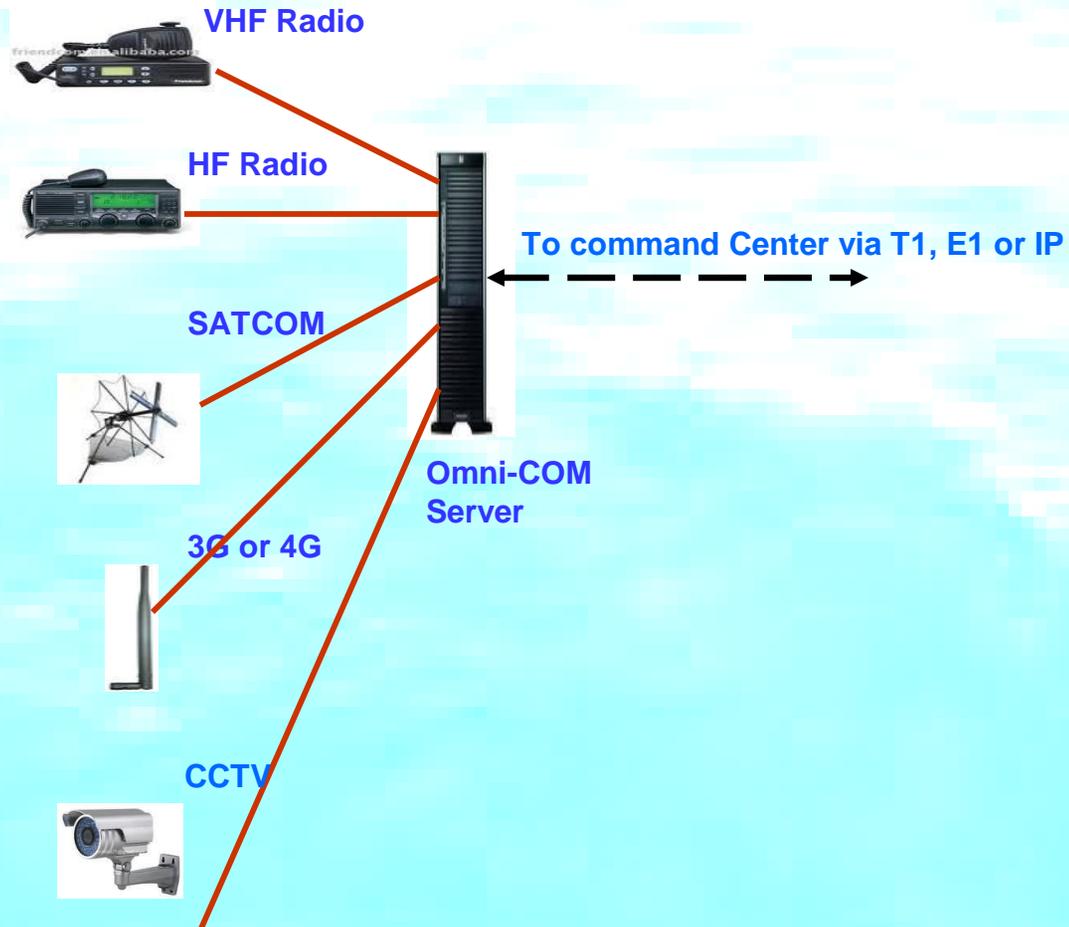
# Omni-COM for Command Center Block diagram



An operator from any position can access any assets based on login profile

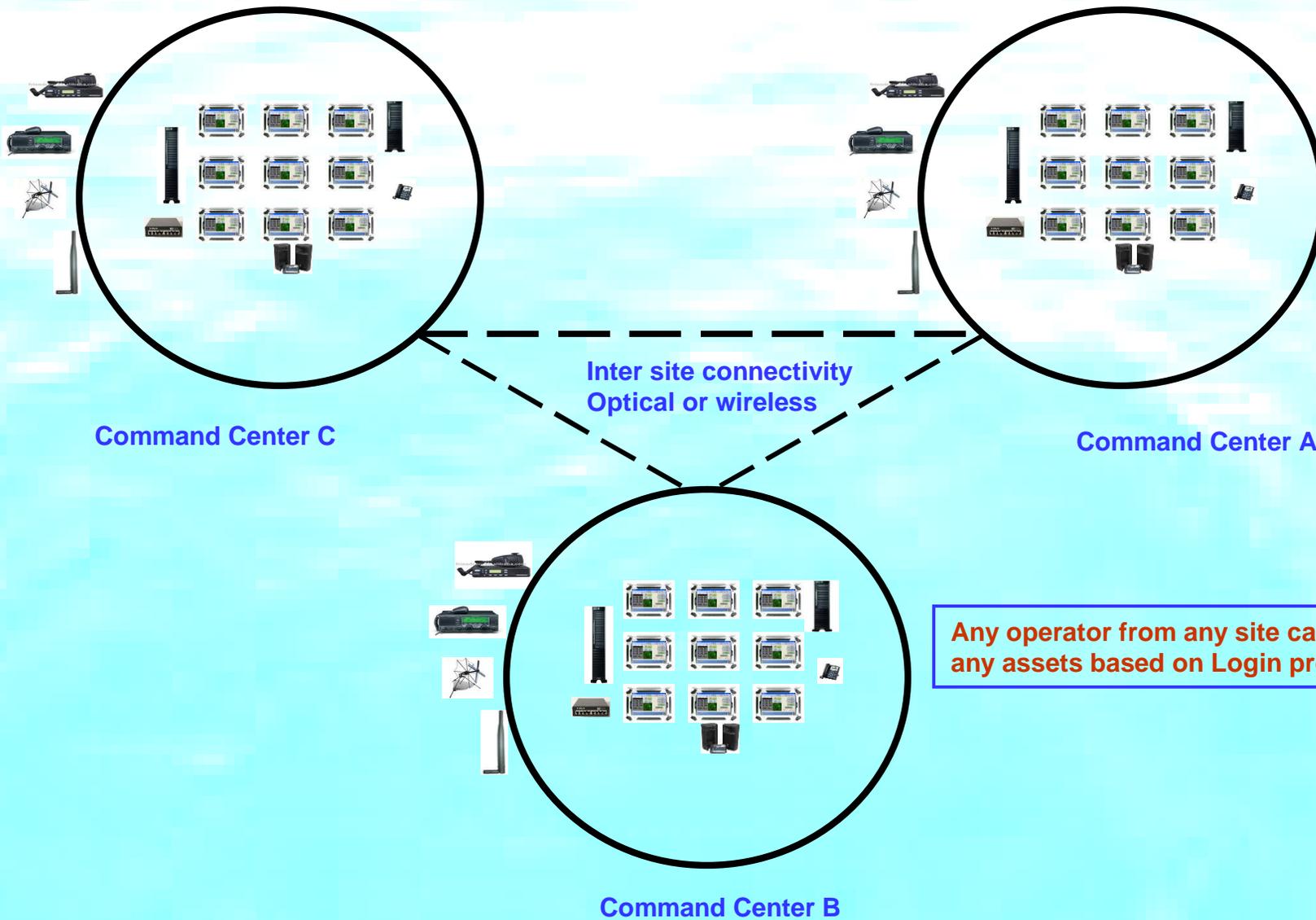


# Omni-COM as Remote Gateway Block diagram





# Omni-COM for multi Command Center Operation



Command Center C

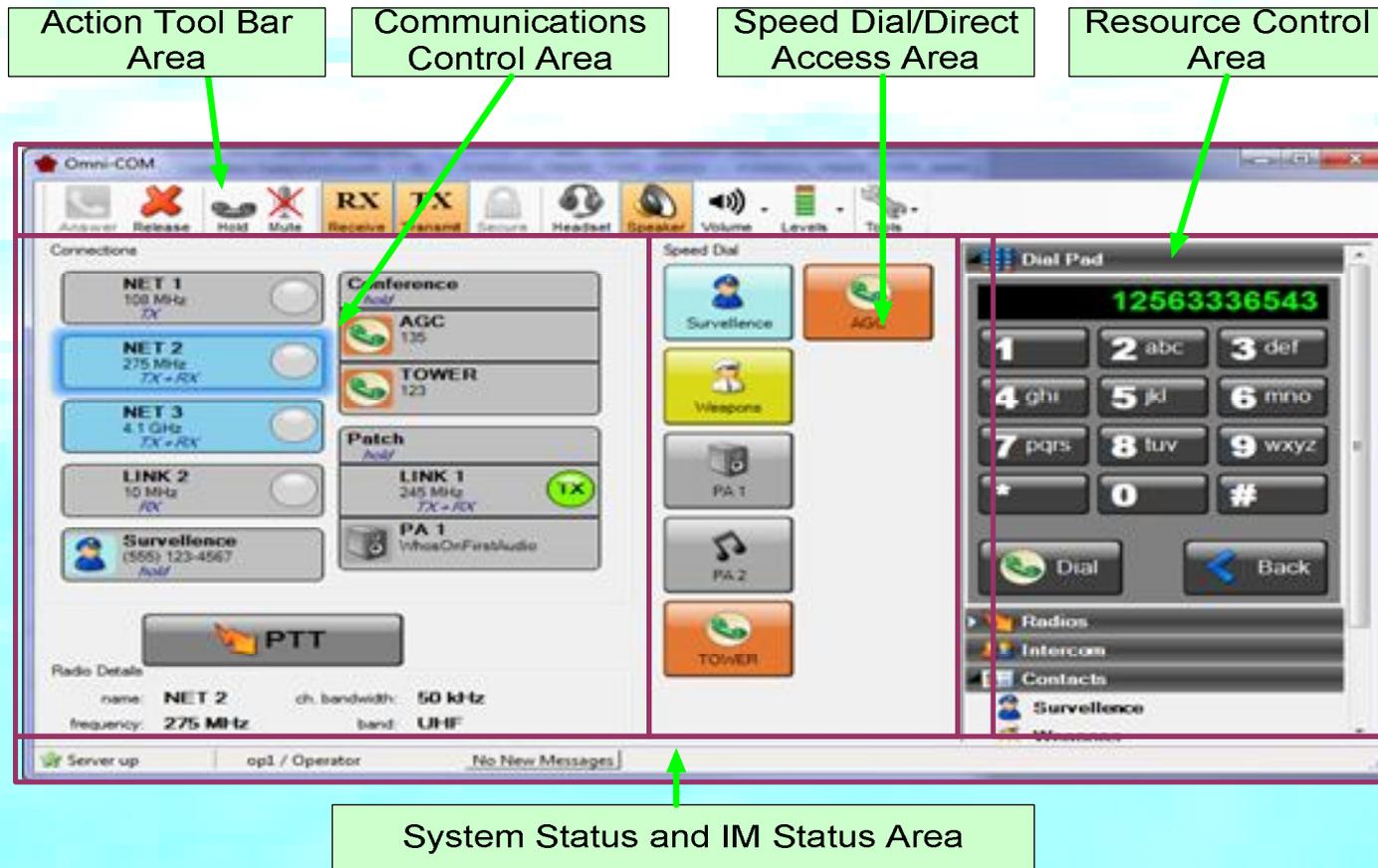
Command Center A

Command Center B

**Any operator from any site can access any assets based on Login profile**



# Omni-COM Operator position Graphical User Interface 1/2

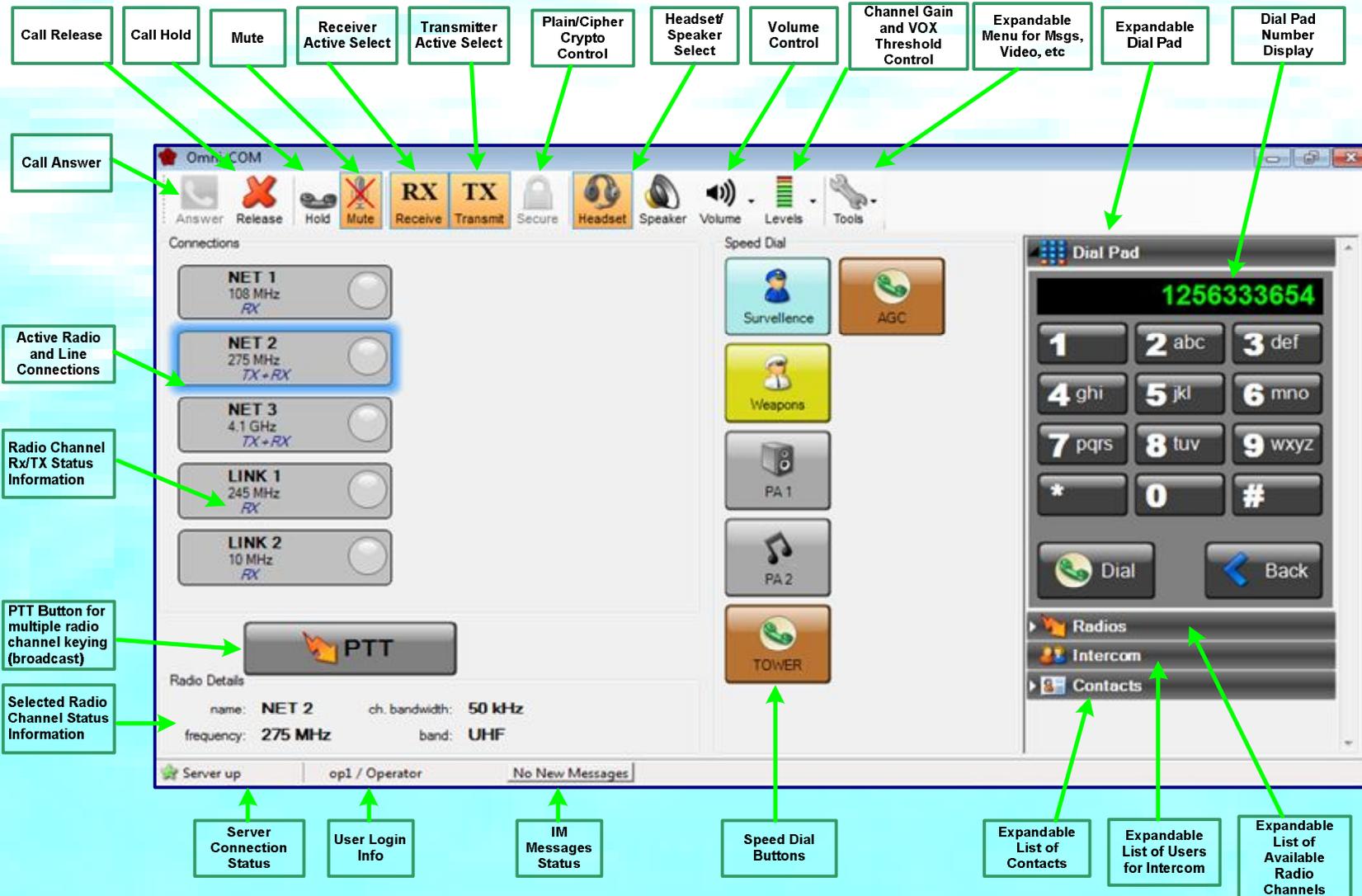


All Widgets are easily customizable to cater new Concept Of Operations

The Graphical User Screen provides: Radio management, Intercom management, Video management and allows operator to make a call, conference, patch intercom to radio, monitor, type IM or SMS, etc.



# Omni-COM Operator position Graphical User Interface 2/2





# Omni-COM general capabilities

Radio	Intercom/Land-line	Video	Collaboration	System General
<ul style="list-style-type: none"> <li>•Enable selection of radio or radios for transmit</li> <li>•Enable selection of radio or radios for receive</li> <li>•Soft patching between radio to intercom or land-line</li> <li>•Soft gain control by channel</li> <li>•Radio status display</li> <li>•Conferencing in soft in operator position</li> <li>•Multi ancillaries support</li> <li>•Automatic radio bridging</li> </ul>	<ul style="list-style-type: none"> <li>•Enable selection of party/parties to call</li> <li>•Status display</li> <li>•Hot key support</li> <li>•Patching with radio</li> <li>•Multi ancillaries support</li> <li>•Call transfer, forward, listen-on hold, mute, conferencing, etc.</li> <li>•Soft volume control</li> </ul>	<ul style="list-style-type: none"> <li>•Supports MJPEG &amp; H264</li> <li>•Soft decoding</li> <li>•Plug-in design to accommodate other standards</li> <li>•Multi video views on single operator position or positions</li> <li>•Ability to annotate and write on the video</li> <li>•Soft zoom and scalable capability</li> <li>•Interfaces to 3<sup>rd</sup> party analytics or application</li> <li>•PTZ and flow control</li> </ul>	<ul style="list-style-type: none"> <li>•Supports annotation on video or static between operators</li> <li>•Multi-media notes sharing capability with IM</li> <li>•Objects (video and data) scalability while zooming</li> <li>•Conferencing with side bar support</li> </ul>	<ul style="list-style-type: none"> <li>•Login and log out</li> <li>•Interfaces to external recorder for record/playback</li> <li>•Supports analog, digital (T1, E1), IP and ISDN interfaces</li> <li>•Distributed processing to achieve 6 nines</li> <li>•smallest foot-print compared to others</li> <li>•Highly scalable compared to others</li> <li>•Standards based for openness</li> </ul>

-Plus unique click and drop features for patching, coupling, bridging and conferencing

-Apart from being the only solution that performs all the above via software; the green Highlighted text indicates more capabilities with the solution compared to what is used today



# Differentiator

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- **Only Software based solution** in market that eliminates substantial stove-piped hardware
  - Substantially reduces capital and logistics costs and minimizes the logistics trail
  - Minimizes power requirements, radiation (EMI), space requirements
- **A single solution that integrates voice, data and video on a single Common Operational Picture (COP). Synchronized real time data feed (video, voice and three others) with low bandwidth requirement. Scripting capability on real time live video with unique click and drop for conferencing, patching and bridging**
  - Enhances operational effectiveness
- **Decentralized architecture**
  - Provides enhanced redundancy, high scalability and reliability



# Thank you

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For more information  
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## Recent wins

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- 1. Communication for Sector Operational center**  
**: 33 operator positions to accesses radios (local and remote) and land-line**
- 2. Communication for Taiwan fast attack boat**  
**: 2 systems per boat for 9 boats**
- 3. Communication for South Korean Military Air traffic system**  
**: 5 operator positions**



# OmniCOM's: Omni-COM system (33 operator positions for Sector Operational Center)

Plus backward compatibility to interface with older analog and digital systems



Omni-COM interfaces to radios and landlines. Any operator from any position, based on login profile can access any assets. The system includes integrated record and playback. The solution is based on pure software based architecture (other vendors are hardware based). Our solution not only provides more capabilities compared to hardware based vendors but also is half the cost (capital and logistics)



# Omniglobe's: Omni-COM system

(2 communication systems per boat for 9 boats.  
1 system for shore command center)



Omniglobe's Omni-COM interfaces to radios and 4G network and provides communication between boats and boats to shore command



## Omniglobe's: Omni-COM system (5 position for South Korean Military ATC)



Omnicom interfaces to radios and landlines. Any operator from any position, based on login profile can access any assets. The system includes integrated record and playback. The solution is based on pure software based architecture (other vendors are hardware based). Our solution not only provides more capabilities compared to hardware based vendors but also is half the cost (capital and logistics)