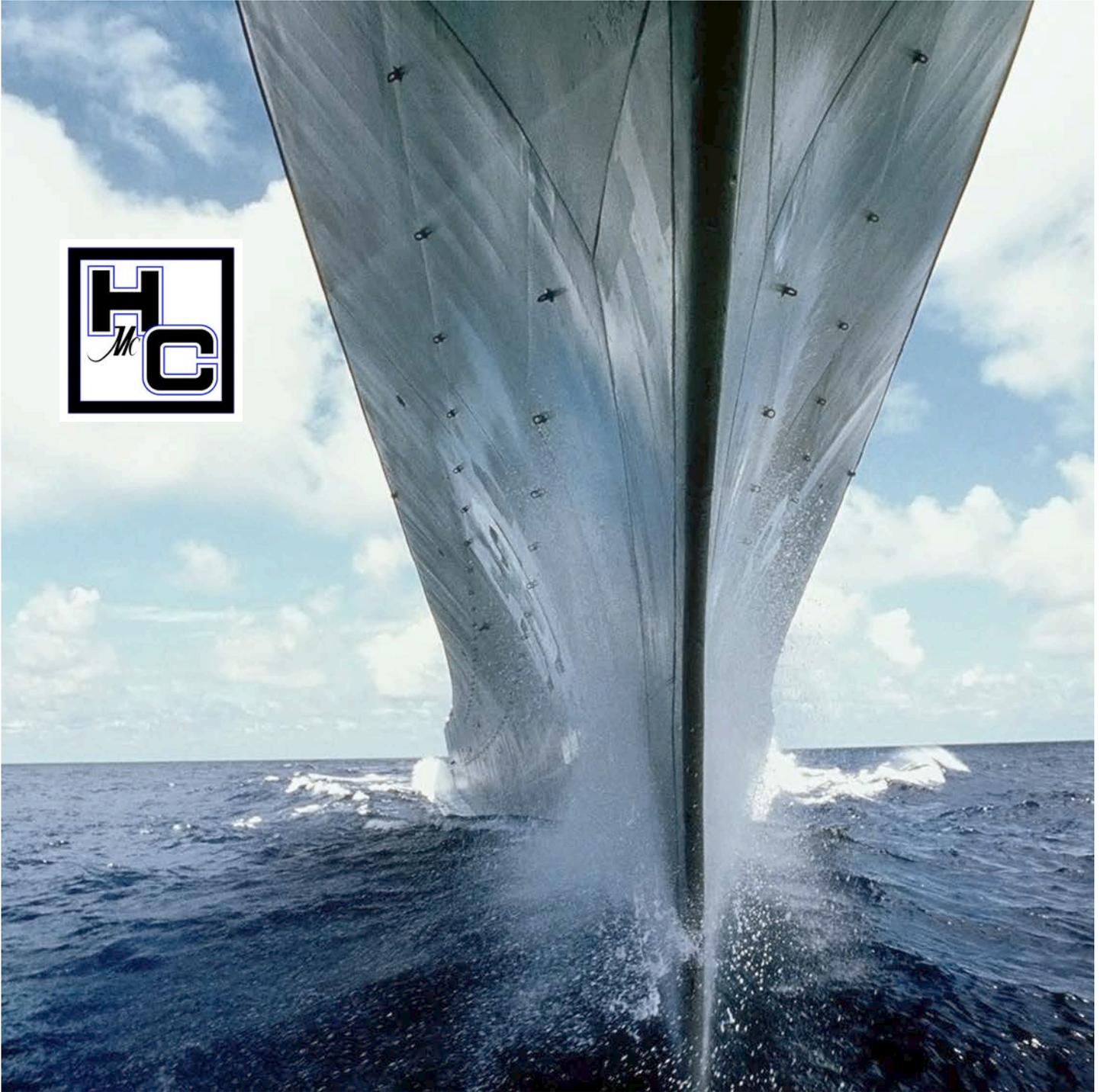


Hose-McCann Communications



THE NEXT GENERATION COMMUNICATION SYSTEM



Hose-McCann Communications is a leader in marine communication products. From our beginnings in 1923, pioneering Sound Powered Telephone systems, until today, with our suite of interior communication products, we believe in progress through innovation.

ICP - Integrated Communications Platform, is the next version of our

products developed to address the needs of customers in the marine industry. Our advanced communications platform was designed to accommodate your requirements within a single solution.

This VoIP-based system allows increased flexibility for expansion or modification with enhanced functionality in a smaller footprint.

A DESIGN FOR ALL REQUIREMENTS

There are three groups interested in the communication systems on a vessel: the owner, the architect, and the shipyard. The flow of information from and to each member comes to rely primarily on the needs of each group along the timeline of the vessel's life.

CURRENT SYSTEMS

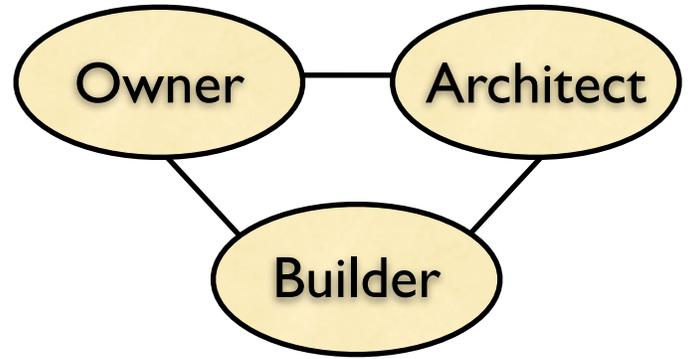
Current systems are based primarily on analog and digital components independently wired to centralized racks with interfaces between the systems. Each system has its own cabling requirements and end devices. These characteristics and requirements are what HMC refers to as "legacy systems".

A conflict between the three groups immediately arises due to the design of "legacy systems". While the owner is looking for functionality and coverage, this drives the marine architect to design three or more cable plants and find room for ever larger racks. Of course, the shipyard is burdened with increased cable and labor costs for installation and the cost of any modification due to issues found during construction.

THE ENVIRONMENT

The unique construction and operational environment of a ship requires adherence to standards and regulatory bodies, but what is needed to assist all three groups along the project timeline, is flexibility. The ability to quickly incorporate any **change** with minimal impact is the key.

How can a change request from either the owner, the architect, or the yard in response to an increase in functionality, a design change, or a construction challenge quickly be implemented? Our goal was to design the next generation of communication systems with this in mind.



DESIGN CRITERIA

- A shared cable infrastructure.
- Distribution at all levels of the design.
- Redundancy.
- Minimum cable types (two) utilizing only readily available cable.
- Adherence to standards.
- Flexibility and expandability.
- Integration.
- Ease of operation and maintenance.



SYSTEM OVERVIEW

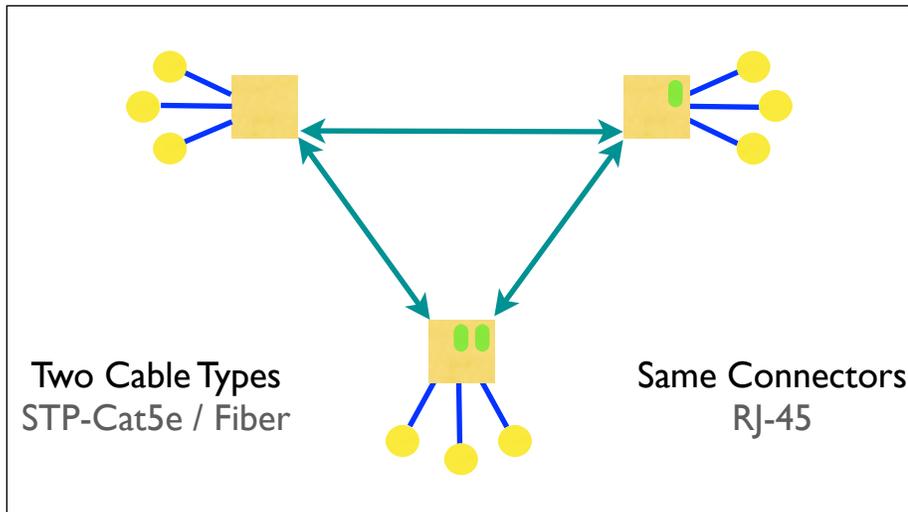
N-C-E

The three components of ICP are: Nodes, Controllers, and Endpoints.

Nodes are congregation points connected to Endpoints and other Nodes. They are distributed in the vessel to connect concentrations of Endpoints and provide redundant paths of communication (fiber optic) in case of a Node failure. The system is an IP based system utilizing standard protocols. While there is power distribution for end devices, there are no localized amplifiers in the system. All speakers are self-amplified. The position of Nodes in the vessel is dependent on regulatory requirements, the engineering layout, and level of redundancy required.

Controllers provide system functionality. PA/GA, PBX, CCTV, Wireless, and Entertainment controllers are placed in one or more Nodes across the system. Critical system controllers like PA/GA are solid state and have no hard drive. Redundancy at the Controller level is accomplished by separating like controllers across Nodes.

Endpoints are connected to the nearest Node. In an integrated system, there is no distinction between Endpoint equipment. All Endpoints are IP ready and are powered from the Node except for higher power items - ie. beacons, LH, trunks.



NODES

Standard Node - 25"H x 24"L x 22"D
 Mini Node - 29.2"H x 26.4"L x 8.6"D
 Switch Over UPS Included - 8 minutes
 (UPS time can be increased)
 Connected via Fiber Optic to other Nodes
 Scalable



CONTROLLERS

19" Rack Mount - 1U
 PA/GA
 PBX
 Wireless
 CCTV
 Ent-Audio
 Mounted in Nodes or Remotely connected



ENDPOINTS

All connected cat5e with RJ45 connector.
 Includes: Interior Speakers, Horns, Loud-Hailers, Contact Makers, Beacons, Relays, Digital / Analog Trunks, Telephones, Wireless Antenna, Cameras, Audio Control Panels, Control Stations.
 Some chaining is allowed.



HOW WE DID IT NEW CONCEPT

Due to the nature of separate systems with independent hardware based logic and separate cabling, it quickly became apparent that a new design philosophy would be required for such a system and that the traditional “legacy” system layout was no longer practical. We reduced the size of the card cages by moving to smaller all in one controllers and developed the

software to replace the hardwired “logic” of the system. Next we eliminated the “centralized” banks of amplifiers by making the speakers self-amplified. This in turn reduced the rack size. Finally, we leveraged VoIP protocols to integrate communications while maintaining the stability and reliability required of these systems.

In the end we had enhanced features and functionality in a smaller, easy to maintain system.



Announcing & Monitoring Station



IP Beacon



IP TB Speaker



Rugged IP Phone



IP Exterior Horn

FEATURES:

PUBLIC ADDRESS

Addressable Speakers	Self Amplified Speakers	Priority Override
Multi-Channel Paging	System Monitoring & Indication	Remote Support
Multiple PA Configurations	Pre-Recorded Announcements	Redundant
Speaker Volume Control	Software Configurable Zones	PBX Paging
ABS Certified	Pre-announce / zone	

GENERAL ALARM

Monitoring & Indication	Digital Files for Alarms	PA Override
Software Configurable	External Activation	External Relays

TELEPHONE (COMMERCIAL & J1TC)

SIP Based	Voice Mail	Auto Attendant
3 Way Conference	PSTN Gateway & Trunk	Dial Plan
Hunt Groups	Call Forward	Browser Config. & Mgmt
Call Park	CDR	MLPP
Redundant Version Available		
Conference Bridge Available		

WIRELESS PHONE (DECT)

Centralized Management	Centralized Configuration
Great Battery Time	Excellent Range
Wireless Load Balancing	Fully IP

CCTV

64 Cameras / Controller	Fixed & PTZ Cameras
Multiple Monitor Display	Soft Triggers
Event Notification	Alarm Recording
Support for Mega-Pixel Cameras	Circular Recording
Separate Playback and Save	Quick Scan

ENTERTAINMENT AUDIO

Multi-channel source	Individual Speaker Control
Room Control Panel	System Control Station
PA/GA Override	Configurable Zones

INTERCOM

Master (Multiple) / Slave or Party Line	Multi-group Slaves
Software Configurable	Receive Intercom & PA
On-the-fly Intercom Groups	



Shore Connection



Wireless Phones

SYSTEM BENEFITS LEGACY VS DISTRIBUTED

It quickly becomes clear that an integrated system designed in this manner allows changes to be incorporated with minimum impact. Addition or movement of an end device (during design, construction, or operation) can easily be accommodated by the system.

With the addition of each controller type to the system, the shared cable infrastructure becomes more cost effective. The design is also effective for installing base systems in yard, and adding additional functionality later (eg. having a PA/GA system initially and adding PBX). It also allows the addition of any future communication system at a later date, lessening obsolescence.

Catastrophic failure of the system would require a triple failure throughout the various components: Node, Controller, Endpoint.

Reduced cable costs and shared cable across multiple systems allows shipyards to gain both material and labor savings. Owners enjoy reduced spares costs and the stability of software driven, solid state components. New functionality is only a firmware upgrade away.

- Easy Installation
- Software Configurable / Upgradable
- Pluggable Endpoints
- Expandable
- Less Cable / Less Cost / Less Weight
- Field-Replaceable Components
- Swappable Endpoints
- Redundant Design



CCTV Camera



Audio Panel



IP Contact



IP Interior Speaker





IP Rugged Handsfree



IP Rugged Intercom



IP Intercom



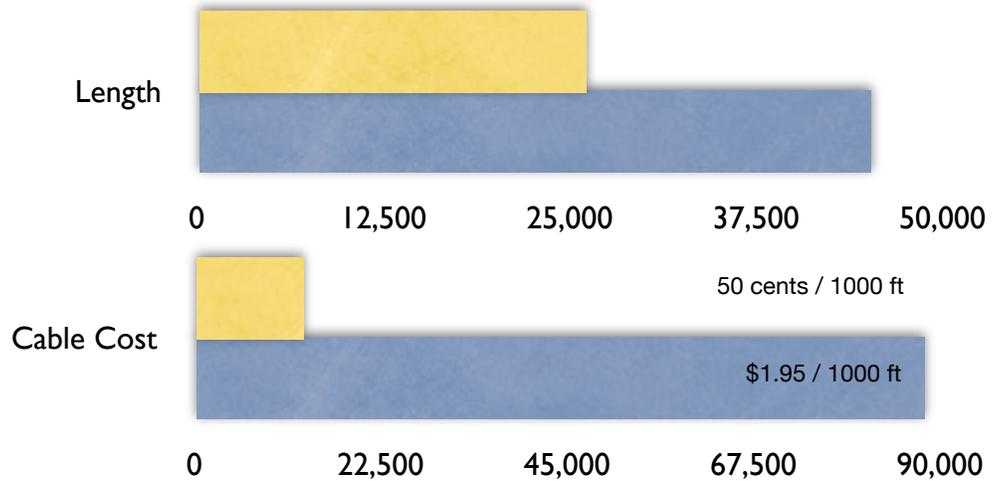
IP Loud-hailer

SYSTEM SAVINGS

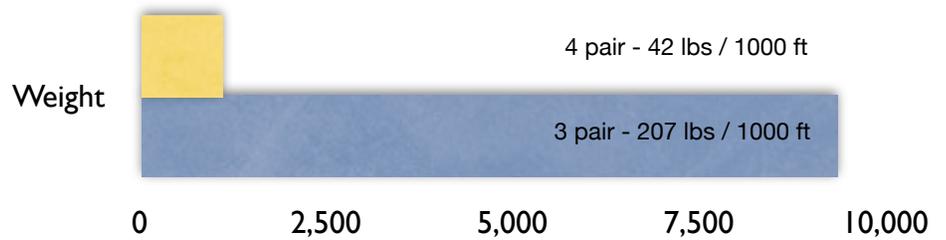
ICP VS LEGACY

A 500 foot vessel, 7 decks, installed with Legacy Pa/Ga and PBX compared with a distributed ICP system produces savings in a number of areas.

REDUCED CABLE LENGTH & COST:



REDUCED WEIGHT:



REDUCED INSTALLATION TIME & LABOR COST:



COMMERCIAL AND NAVY HISTORY & PARTNERS

Hose-McCann has a long history in the Marine Communications Industry and has extensive product knowledge and experience. We have worked with commercial and military customers since 1923 developing, installing, and supporting state of the art communications solutions and products.

We have always believed in developing our systems with a COTS+ approach. That is, ruggedization to meet the marine environment for our commercial customers. Environments that require ships like ice-breakers.

Hose-McCann has experience with US Navy certification testing for Mil-spec items and supplies many Mil-spec communication devices today. Together with our industry partners we are taking ICP from a ruggedized COTS+ system to MIL-S-901D, MIL-STD-167-1, MIL-STD-461.

We also understand the long term needs of customers involved in multi-ship projects and the challenges of product provisioning and documentation at the various stages of these types of programs.

With the addition of ICP and our desire for remote support and upgrades, we believe our partnership and support of all our customers will be easier and more efficient.

We look forward to discussing the advantages of ICP and how this system can be a win - win -win for all concerned in your project.



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"Your Future in Communications"

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