

PDS-XT10077 Rev A

Tactical Communications MC² Client GUI

The BridgeWay MC² command and control operator console is a thin client Graphical User Interface (GUI) that communicates with a BridgeWay embedded server/call manager over VoIP networks.

As a result of embedding an MC² server/call manager into the BridgeWay system, the BridgeWay network does not require the additional external servers, call managers, conferencing servers or telephone interworking systems and equipment typically required by earlier generation system design.

The MC² Client GUI provides operator command and control over multiple radios and telephones, radio cross patching, interconnection with PBX and telephone networks, conferencing and intercom communications across wide area multi-node VoIP networks.

Multiple BridgeWay systems may be networked together and MC² console operators may log on to any terminal located on the network.

MC² FEATURES AND BENEFITS

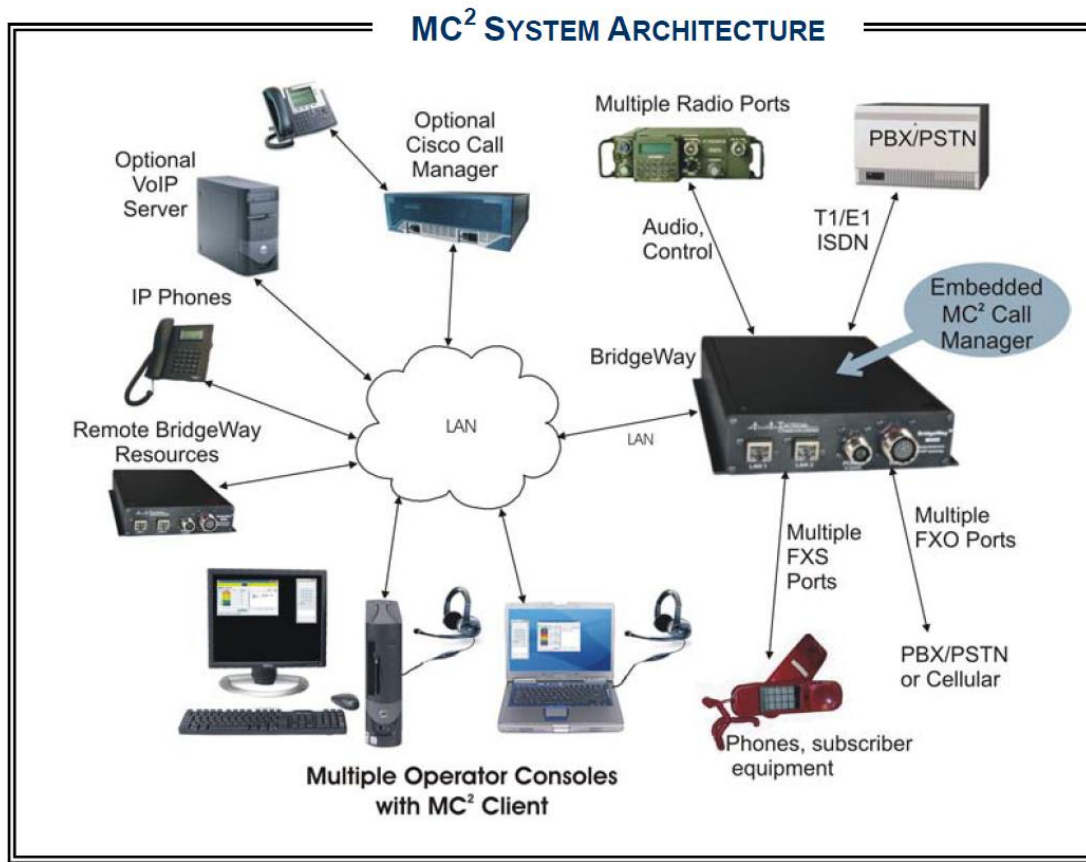
Features and benefits of MC² include:

- Programmable console operator GUI screens allow customization of GUI look, feel and functionality.
- System Administration GUI allows simplified system configuration and preset mission profiles
- Softphone GUI networks BridgeWay with telephone networks and IP phone equipment.
- Intercom GUI networks BridgeWay with other operator console operators.
- Console operator ID allows log in from any VoIP workstation/terminal on the network and auto screen preference loading.

- Console operator ID allows auto loading of personalized or mission appropriate GUI screens.
- Easy to edit language files permit user interface to be presented in any language.
- Multi-level precedence protocol assignments adapt BridgeWay for mission critical operations.
- Multi-party conferencing networks support coordinated communications.
- Multi-channel monitor and mixing feature supports operator multi-tasking.
- Multiple operator Intercom channels support operations between multiple workgroups.
- Operator programmable radio and intercom mixing monitor adapts the MC² GUI to operator requirements.
- Simulcast “one-to-many” broadcast capability supports mission critical communications.
- User dial access to radios, conferences, PA broadcast and operators provides an intuitive system for universal communications.

MC² RADIO GUI

- The MC² radio GUI allows the operator to identify radios to be monitored via the MC² radio mixer.
- The MC² radio channel mixer provides an individual gain control for each channel.
- The MC² console operator may cross-connect (patch) radios with each other, providing repeater and cross-band communications functionality.
- The MC² console operator may select a radio for transmission when PTT is activated, as well as selecting multiple radios for simulcast (simultaneous broadcast) transmissions.
- MC² supports footswitch, in line headset switch and mouse control of PTT commands, or voice operated PTT.



MC² SOFTPHONE GUI

The MC² Softphone GUI allows the operator to make and receive calls over telephone resources, such as FXO, E&M, T1/E1 and FXS lines, IP phones and PBX stations. The softphone GUI provides dial access to intercom links with other operators on the network and conference nets across multiple locations. The intercom GUI displays a list of other users currently present on the selected intercom nets.

The MC² embedded call manager allows user direct dial access to other operators, radios, conference nets, IP phones and telephone lines from any location on the IP network.

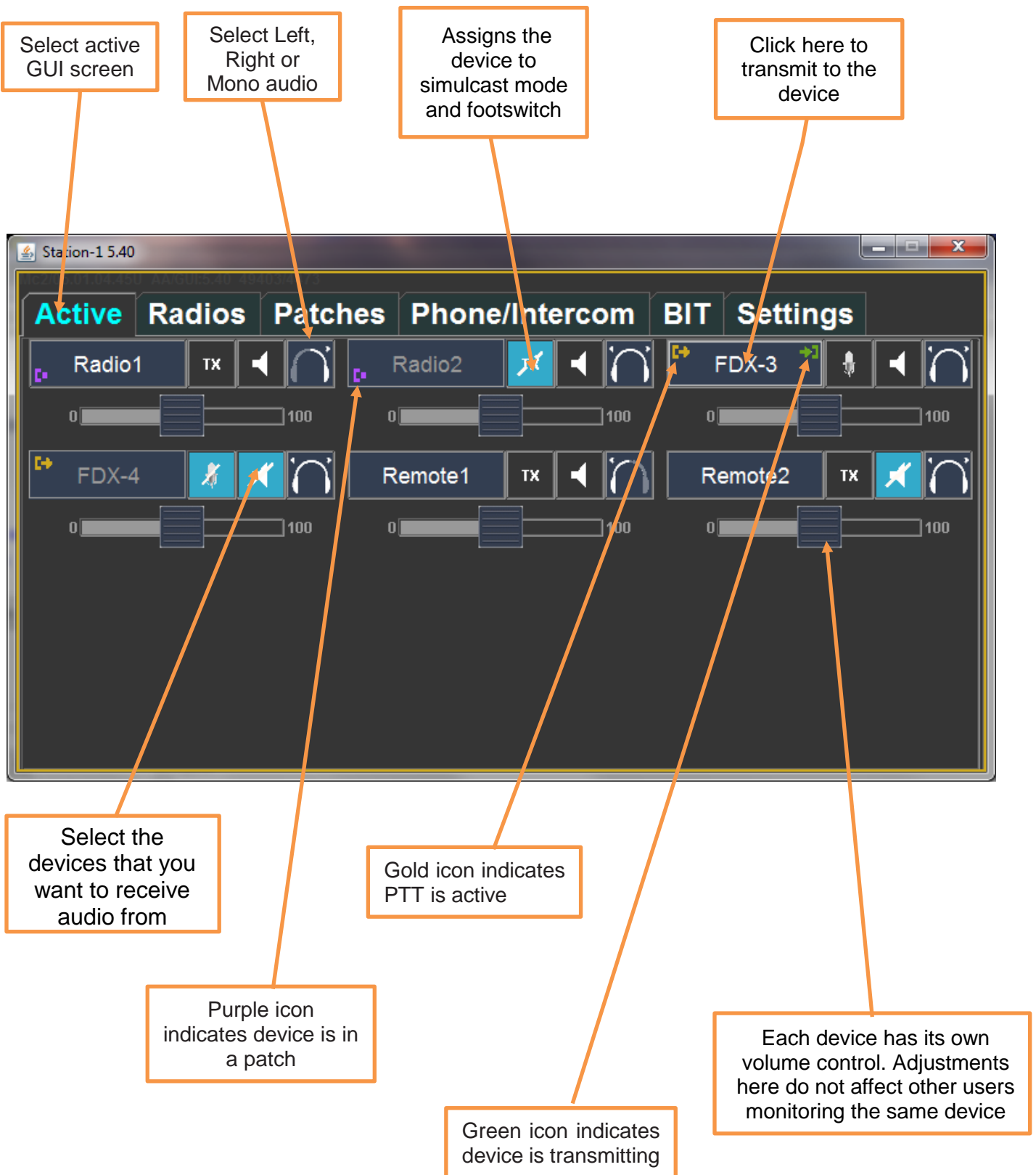
The MC² System Administrator constructs a dial plan by assigning virtual telephone numbers to each BridgeWay connected resource – radios, PBX's, operator consoles, etc., and virtual numbers to conference nets.

MC² ADMINISTRATIVE GUI

MC² features a web browser administrative GUI used to configure the BridgeWay system and the operator console screens.

The MC² database stores system configuration parameter values and console operator default screen configurations. Operator screen configurations are associated with the user logon ID and are automatically loaded when the operator logs on.

Pre-configured mission profiles may be loaded into the BridgeWay system and selected by the system administrator prior to mission launch.



MC² GUI Active Assets Screen

UNDER THE HOOD

The BridgeWay MC² client GUI is a platform independent JAVA application executing on any laptop, computer or workstation supporting a standard web browser and JAVA scripts.

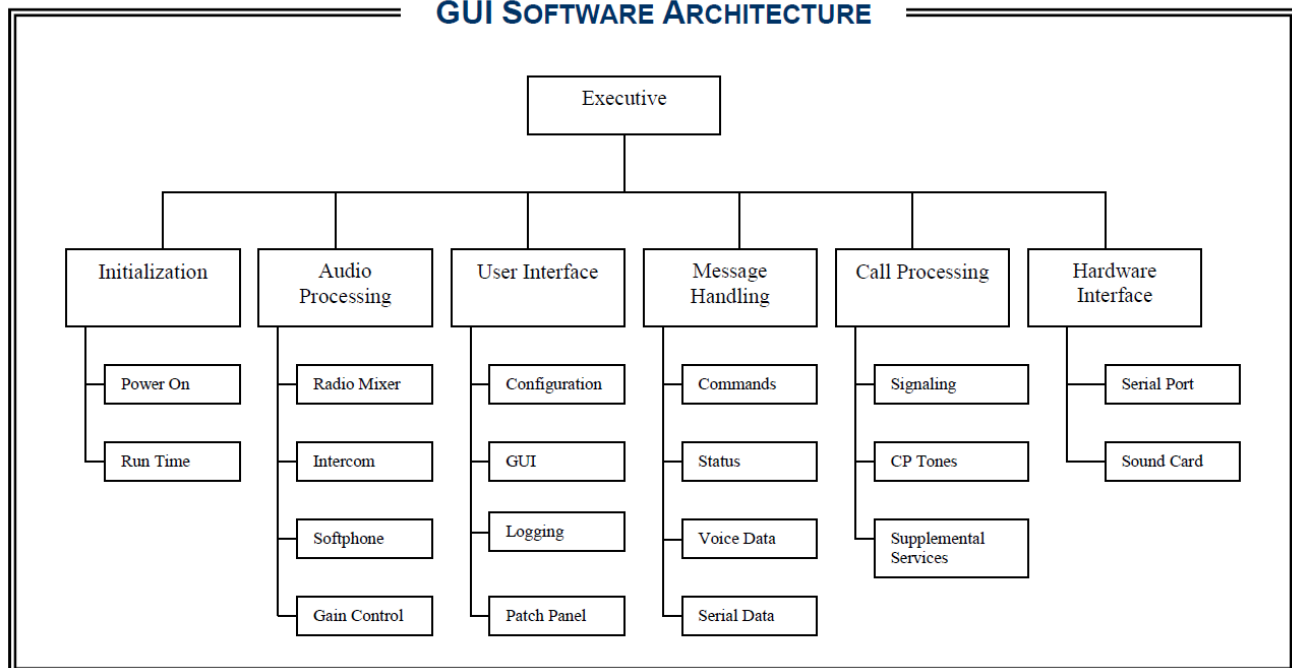
The MC² client GUI interfaces with hardware signaling, resource control and call management functions embedded on the BridgeWay system.

Audio to the client console is RTP VoIP formatted and includes separate left and right ear feeds. To

conserve network bandwidth, transmission of audio from the BridgeWay system to the clients is suppressed during silence periods.

In contrast to earlier multicast methods, only one composite RTP stream is sent to a client console. The composite RTP stream contains a mix of high quality audio from all of the resources (i.e., radios, telephones, intercom links and conferences) engaged in communication with the operator.

GUI SOFTWARE ARCHITECTURE



Specifications subject to change without notice

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US patents 8,442,506 and 9,154,630