



## **Multi-agency Interoperability with Dispatch Participation via Control Stations**

### **Scenario:**

*(Note: Under this scenario, radio users (police officers, etc.) from different radio systems will be able to communicate.)*

A multi-agency event (e.g. DUI taskforce) occurs in the Phoenix network. A TRWC unit (e.g. Mesa unit) is participating in the event. All subscribers directly involved in the event select an interoperability talkgroup on the Phoenix network. This talkgroup (Phx Interop TG A in the example above) allows all participants to communicate with each other and Phoenix dispatch (assuming they are monitoring this talkgroup). For this scenario to work, all subscribers, TRWC and Phoenix, must have the Phoenix interoperability talkgroups programmed into their radios.

For a TRWC dispatch center to also participate in the event, a control station will be used. This control station is programmed with the event talkgroup being used (Phx Interop TG A in the example above) and is connected to the TRWC dispatch center consoles. The control station provides the dispatcher the ability to communicate on the Phoenix network.

In addition to being able to communicate with subscribers involved in the event, the talkgroup now appears on the TRWC dispatch center consoles and can be patched to any other TRWC talkgroup. This patch will allow other users (e.g. command staff) on the TOPAZ network to communicate with units involved in the event occurring in Phoenix.

**Infrastructure Required:**

A control station and an associated base station interface module (BIM) are required to provide the functionality described in the scenario above. A single control station can be programmed with multiple talkgroups that can be selected by the dispatcher. If more than one talkgroup needs to be active at a time, then multiple control stations and BIMs will be required. Currently, the City of Mesa has three control stations that are set up for this purpose. These control stations were originally used with the Tempe trunk system under the same scenario and could be reprogrammed to function on the Phoenix network. With these control stations, three events with three different talkgroups could be supported at one time. Or, a single event using three talkgroups could be supported.

The costs associated with implementing a control station interoperability solutions are as follows:

Control Station:	\$ 5,400 each
Base Interface Module:	\$ 1,300 each
Antenna/feedline:	\$ 475 each
Labor (Installation/Programming):	\$ 750 each
<b>Sub-Total:</b>	<b>\$ 7,925 each</b>
<b>Contingency:</b>	<b>\$ 2,075</b>
<b>Total:</b>	<b>\$10,000 each</b>

These costs will increase incrementally depending on how many simultaneous talkgroups need to be supported. The ability to support multiple control stations will vary depending on available console resources at each individual TRWC dispatch center. These resources will need to be evaluated on a case-by-case basis.