**11/7/18 – Wayne-Pike ARES Net – Training**

***“NTS Traffic Cycles”***

If you’ve ever listened to the opening preamble of a NTS Traffic Net such as the Eastern Pennsylvania Emergency Phone Traffic Net (EPAEPTN), you probably heard something like “This net is affiliated with the ARRL’s National Traffic System Cycle 2, and also Radio Relay International, on a Section Level.” Well, what the heck is “Cycle 2”?

The National Traffic System includes four different net levels which operate in an orderly time sequence to affect a definite flow pattern for traffic from origin to destination. A message flows through the National Traffic System in a manner similar to an airline passenger who starts out in a small residential town with a destination across the continent in another small town. He has to change carriers many times in the process, starting with a local ground conveyance to a feeder airline, to a transcontinental airline, to another feeder airline, then local transportation to deliver him to his destination. In a very similar manner, the transcontinental message starts with the originating station in a local net, is carried to the section net, the region net, the area net, via Transcontinental Corps (TCC) to a distant area net and then back down the line to delivery.

Of course, the message, like the passenger, can "get on" or "get off" at any point if that's the origin or destination. Thus, a message from, say, New York to Detroit would never get on TCC, but would "get off" at area level. A message from San Francisco to Los Angeles would not go beyond region level, and one from Syracuse to Buffalo would remain inside the section net.

These nets are (1) Local level, like our ARES Net, (2) Section level, like the EPAEPTN, (3) Regional level, like the 3rd Region Net, and (4) the Area Net, like the Eastern Area Net.

There is also an organization called the “Transcontinental Corps”, or “TCC”. This is a group of designated stations who have the responsibility for seeing that inter-area traffic reaches its destination area. TCC is administered by TCC directors in each area who assign stations to report into area nets for the purpose of "clearing" inter-area traffic, and to keep out-of-net schedules with each other for the purpose of transferring traffic from one area to another.

The order that the various nets meet is essential to the proper operation of the system. The effectiveness of the National Traffic System depends on a delicate balance of voluntary cooperation and adherence to established procedures. In 1979, the NTS Area Staffs jointly recommended a symmetrical, four-cycle NTS net sequence which is now the formal system definition for voice and CW modes.

Cycles Two and Four are, at this time, implemented in all three areas – Eastern, Central, and Pacific. In addition, Cycle One is implemented in the Pacific Area, and Cycle Three is implemented in the Eastern Area to facilitate intra-area and west-to-east traffic flow. Cycles One and Three were initially designed for high-volume situations to improve and enhance the response of NTS to emergency and overload situations. However, the entire four-cycle sequence can, if need be, activated in three-hour shifts when needed.

Generally (and really an oversimplification for purposes of explanation of the process), Cycle-1 is in the morning, Cycle-2 in the early afternoon, Cycle-3 is in the late afternoon or early evening, and Cycle-4 is in the later evening hours. This way a message can be initiated in the morning at the local level, passed up to the Section level, passed up again to the Region level, etc. Similarly, a message could be passed down from the TCC to the Area Level, to the Region level, to the Section level, to the Local level all in one day.

The actual cycle sequences are subject to many changes depending on propagation, quantities of traffic, emergency status, etc. These changes are passed down thorough nets as they occur.

The original goals of the four-cycle plan are as follows:

1. Make daytime and evening NTS part of a single, unified system.

2. Resolve net time conflicts between areas.

3. Enhance daytime/evening participation. TCC functions provide daytime/evening crossovers, so that traffic is delivered in the next available cycle of NTS, regardless of time of day or mode.

4. The system will be consistent from area to area, from cycle to cycle.

5. Evening participants will understand (and support) the daytime cycle and vice versa, with no additional training.

6. No traffic will be compromised for any other traffic by irregular net sequencing.

For more details on the Cycle Plan, refer to the NTS Manual, available on the ARRL’s website. Frankly, even the explanation in the NTS Manual is a little confusing, but – from a traffic handler’s perspective – the important thing is to know when and where the nets will be held that you would normally check into or are assigned to check into as a representative for a lower level net. The Cycle assignments are handled by Net Managers and the TCC.