

## **Flight Termination Systems Committee**

The Flight Termination Systems Committee provides a forum for all issues and technologies related to flight termination systems. Members from several different ranges support this effort and come together to discuss various flight termination issues and concerns that need to be addressed. Some of the major efforts and issues that the committee discussed in 2007 included the following:

- RCC 319, *Flight Termination Systems Commonality Standard* rewrite
- The enhanced flight termination system
- The autonomous flight safety system/autonomous flight termination system
- Frequency interference
- National Security Agency High Alphabet decertification

### **RCC 319, *Flight Termination Systems Commonality Standard***

RCC 319 was revised to include new technologies and lessons learned that were used to update and clarify various flight termination system requirements. This task began in 2003. The standard was completed and released in 2007.

### **Enhanced Flight Termination System**

A major topic of discussion in 2007 was the enhanced flight termination system. Members of the Flight Termination Systems Committee supported various testing and operations associated with this program in 2007 and continue to play an important role in developing this system. Some of the issues the committee is working on are listed below:

- The process for communicating with possible new vendors wishing to design enhanced flight termination system receivers and/or ground equipment
- How the enhanced flight termination system will be incorporated into RCC 319
- How the enhanced flight termination system will affect RCC 313, *Test Standards for Flight Termination Receivers/Decoders*

Many milestones were accomplished this year as the enhanced flight termination system continues to progress toward becoming a certified system while the committee continues to support this program and its endeavors.

### **Autonomous Flight Safety System/Autonomous Flight Termination System**

The committee also discussed various uses and implementations of the autonomous flight safety system/autonomous flight termination system. Right now, there is no plan to use this system on any of the major ranges. More testing and qualification will have to be done on this technology before the ranges will consider using it.

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### **Frequency Interference**

Frequency interference is still a major concern at several ranges. There is still some concern with PAVE PAWS radars located at Beale Air Force Base in California and at Cape Cod in Massachusetts. However, through coordination with these operators, a mitigation effort has been used for all launches from the Eastern and Western ranges.

At other missile ranges, the enhanced position location reporting system is also a major concern. Along with other organizations, the Flight Termination Systems Committee is working hard to come up with a viable, long-term solution to the frequency interference issue.

### **National Security Agency High Alphabet Decertification**

Another issue that has been discussed recently is the decision to decertify High Alphabet as a secure system. Today High Alphabet is the most secure flight termination system available. However, the National Security Agency has stated a desire to move toward a more secure and encrypted system.

High Alphabet is used on numerous launch vehicles around the country and those programs will be forced to move to a new system if High Alphabet is decertified. As of now, the National Security Agency has stated that they will no longer support High Alphabet after 1 January 2015. The Flight Termination Systems Committee will be working with ranges and programs to help provide a smooth transition and ensure that range operations are not adversely affected during this timeframe.

### **Flight Termination Systems Committee Meetings**

During 2007, the Flight Termination Systems Committee participated in two meetings held by the Range Commanders Council, Range Safety Group. The meetings took place in June in Florida and in November in New Mexico. Topics discussed are presented below.

#### **June Recap**

In June, the Flight Termination Systems Committee met at the Range Safety Group meeting at Patrick Air Force Base to discuss ongoing issues relevant to flight termination systems. The main topic of discussion was the enhanced flight termination system. Major milestones accomplished by the program as well as future applications and implementation of the system were discussed. Members of the enhanced flight termination system program presented the status and future of the program to the committee.

Other topics discussed were the release of RCC 319, *Flight Termination Systems Commonality Standard*, the autonomous flight termination system/autonomous flight safety system, frequency interference at various ranges, and National System Agency decertification of the High Alphabet system.

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### **November Recap**

At the November meeting in Albuquerque, the Flight Termination Systems Committee discussed ongoing issues relevant to flight termination systems. Once again, the main topic of discussion was the enhanced flight termination system. The current status of the program as well as future milestones and applications were presented. Other topics discussed included emerging unmanned aerial vehicle programs and the impacts to RCC 319, Herley flight termination system receiver issues, and directed energy applications and their impact on flight termination system components and requirements.