

## **Part Five**

### **Meeting the HMD Design Challenge**

The goal of any designer for any system, helmet-mounted displays (HMDs) included, is to develop a system that provides optimized performance for the intended user in the intended environment. For military HMDS, the intended user is the Warfighter, and the operational environment is the battlespace. This is a truly difficult task for the HMD designer. The innumerable factors that must be considered in a design are diverse and frequently in contradiction. These factors obviously include optical and acoustical engineering parameters. Next are the human-related issues of vision and audition. These are joined by ergonomic, biodynamic, and human factor considerations. In the end, there may be no “optimal” HMD design, but instead, a variety of designs that are task and user specific.

