

EXSYS Case Study

Aircraft Material and Process Design Expertise



Rockwell International

Material and process considerations are often addressed late in a design process. This is due to specialized knowledge in these areas not being readily available to the design engineer, who can not be expected to be a specialist in all areas of materials. The usual approach has been to have a specialist sign-off on the design later, which can result in expensive time and resource redesign, when a material or process problem is detected too late.

To help solve many of these design problems, **Rockwell International's Autonetics Sensors and Aircraft Systems Division** decided to use knowledge automation systems. Many systems have been developed including those for:

- ◆ Corrosion Protection
- ◆ Adhesive Selection
- ◆ Encapsulant Selection
- ◆ Conformable Coating Selection
- ◆ Heat Treatment of Metallic Materials
- ◆ Selection of Soldering Processes

These systems, developed in collaboration with domain specialists, make this “project-rolling” knowledge widely available to the Rockwell design engineers. The engineers using the systems have potential problems indicated before designs are finalized, and are educated by the systems in the process.