

Tool Control Program

Advantages and Features

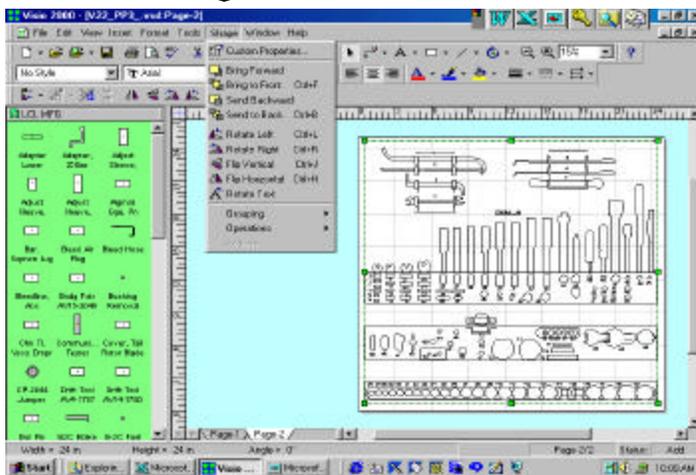
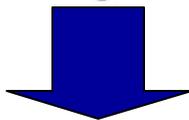
Using a NAVAIR Lakehurst designed software program, customized tool kits and manuals can be developed, designed, and configured to accommodate any application. This digitized process allows for:

- Instant tool inventory for specific tasks
- Rapid updates to manuals
- Positive tool accountability
- Quick and easy access to tools

Technical Description

A myriad of maintenance actions are required to service and repair Navy aircraft. An aircraft could have more than 100 different types of maintenance service requirements, each with its own unique set of tools. In addition, space limitations on an aircraft carrier necessitate the use of compact toolboxes containing only the necessary tools required for each specific maintenance action. NAVAIR Lakehurst technologists are responsible for designing and developing customized toolboxes and manuals to accommodate maintenance and tooling requirements for most Navy aircraft and their support equipment.

Information is taken from the tool control manuals and used to design toolboxes for specific maintenance task listed in the manuals. This eliminates the need for toolboxes containing tools that are not needed, which saves money, time, and space. Each tool has an assigned location within the toolbox to help keep track of all the tools within the box and quickly identify any missing tools.



These NAVAIR Lakehurst technologists have greatly improved the speed and ease with which these tools control manuals and boxes are developed through the use of digital processing. The process is as follows: A computerized tool menu has been compiled consisting of over 9,500 commercial off-the-shelf tools. From this menu, any type of toolbox can easily be configured by dragging and dropping tool shapes into a "toolbox" on a computer monitor. These items are simultaneously incorporated into a digital manual that accompanies the kit. The tool control manual depicts the toolbox layout, tool description, part number, price, etc. This process reduces work and ensures greater recording accuracy as on-screen layout changes are automatically made in the manual. An added benefit is easier tool accountability. Technicians can immediately see which tools are missing after maintenance, which can help prevent equipment damage from a stray tool.

When requested, tool kits can be configured using a water jet technology in the Lakehurst Prototyping and Manufacturing Department. The water jet machine cuts through foam precisely leaving a customized spot for each tool. The tools can also be etched with their unique location or owner's name using a state-of-the-art laser marking system, which enhances security and inventory controls.

The NAVAIR Lakehurst team is currently working on developing tool kits for a number of Navy aircraft programs. These include the V-22, F-18, T-45, and H-60 support equipment programs.

For more information contact

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Potential Applications

This technology has been prototyped and demonstrated to work. NAVAIR Lakehurst technologists can work with you to develop a tool control program for your specific use. Potential applications include commercial airlines, the automotive industry, or any aspect of the manufacturing industry that requires control and accountability of tools, parts, and inventory items.

Licensing and Partnering Opportunities

Domestic technology transfer and partnership activities are integral elements of the Department of Defense's national security mission and concurrently improve the economic, environmental, and social well being of U.S. citizens. At the same time, technology transfer supports a strong industrial base that the Department of Defense may use to supply U.S. defense needs.

Several mechanisms exist for partnering with NAVAIR Lakehurst. These include cooperative research and development agreements (CRADAs), commercial service agreements (CSAs), and licensing of government-owned technologies. Under a CRADA, Lakehurst engineers and scientists work cooperatively with their peers in industry or academia on mutually beneficial research and development. The Navy has been given statutory authorization, via CSAs, to use Navy facilities to perform specific types of work for private parties. NAVAIR Lakehurst frequently produces patented, innovative discoveries of commercial value that are available for licensing to the private sector.

The Naval Air Warfare Center Aircraft Division Lakehurst, known as NAVAIR Lakehurst, is part of the Naval Air Systems Command. NAVAIR Lakehurst researches, develops, tests, and procures aircraft launch and recovery systems and support equipment for Navy and Marine aviation.

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