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Abstract
Mission of military operation center is to implement command and control battle. The main purpose is to order correct troop or weaponry under threaten of the enemy's weaponry or movement. Nowadays, science and technology advance very quickly. The information equipments are widely applicable to command and control battle. Meanwhile, associated semiconductor and information equipment are fabricated as small as possible. Heat transfer efficiency of the equipment has therefore been noticed as the unit surface areas are usually too small to dissipate heat. Purchasing a high efficiency air-condition system becomes an essential method for military operation center to solve the heat dissipation problem.
In the viewpoint of heat transfer, although planning enough air-condition devices is important while effective air flow design, on the other hand, can be an efficient factor to bring out the produced heat. So effective air flow room design can save energy and therefore decrease national defense budget. In this paper we simulate air flow and heat transfer efficiency of an information center by utilizing ANSYS software. The work provides reference data for military consulting to build operation center. On the other hand, the data also proposes suggestion for designing air-condition system to satisfy environment restrictions and to keep equipment appropriateness to increase weapon system reliability and capability to implement performance.
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