

## THE NETWORK CENTRIC WARFARE AND NETWORK ENABLED CAPABILITIES INFLUENCES ON C4ISR SYSTEMS

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Specifically, the present era of warfare, in which computers have been embedded in weapon platforms and communication systems, is at best only three-decades old. Today the computer is ubiquitous and embedded in almost every aspect of modern society's activity. This trend is well known as *information and communications technology* development.

Indeed, the first electronic and programmable computer, code-named Robinson, was invented in England in 1940. It was mainly used to break German codes. Just three years later, a computer named Colossus would debut with one thousand times more speed. However, by 1946, the primary role of the computer had shifted from wartime applications to scientific endeavors. International Business Machines (IBM) introduced the IBM Model 701—which initially was named the Defense Calculator—and almost immediately received eighteen orders for use in designing aircraft and jet engines and for other applications requiring repetitive operations.<sup>1</sup> To be sure, much of the ability to calculate was directed towards nuclear weapons research,<sup>2</sup> but it is also true that business management information systems and the invention of the software language validated the

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<sup>1</sup> [http://www-03.ibm.com/ibm/history/exhibits/701/701\\_intro.html](http://www-03.ibm.com/ibm/history/exhibits/701/701_intro.html)

<sup>2</sup> Wineguard D., Akera A., "A Short History of the Second American Revolution," *University of Pennsylvania Almanac*, v. 42, no. 18, January 30, 1996, p. 6.