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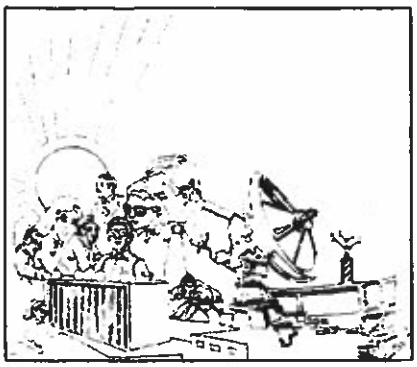

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Information Warfare:

A New Business Line for NSA

by [redacted] G42

(~~TS-SCI~~) One of the new buzzwords in the hallways these days is Information Warfare (IW). IW is defined as the preservation of the integrity of our information systems from exploitation and corruption by potential adversaries while at the same time exploiting and degrading adversary information systems. At the same time, as adversaries increase their use of these systems, we also see an increase in the SIGINT opportunities for exploitation. In many cases, the vulnerabilities that require protection in our own systems are also exploitable weaknesses in an adversary's system.

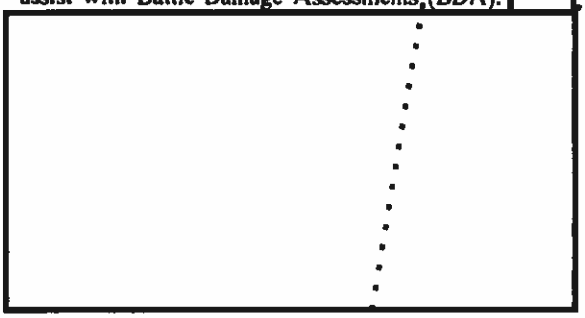
(~~TS-SCI~~) Information Warfare is really an expansion of the concepts of Command and Control Warfare (C^2W). Under C^2W, we attempt to deny or degrade an adversary's ability to characterize the battlefield, and control his own forces. In the past, military communications tended to be dedicated systems which were independent of any civilian systems, and C^2W concentrated on the ability to identify, collect, and disrupt these dedicated systems. With the growth of the Global Intelli-

With the interconnections among world telecommunications providers...we have expanded the concepts of Command and Control Warfare into Information Warfare.

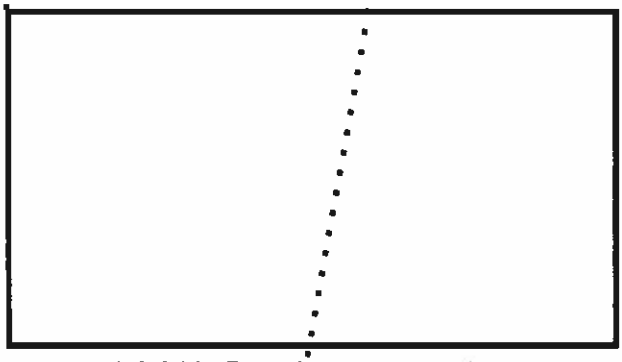
gence Network and the interconnections among world telecommunications providers, [redacted] With this expansion of the possible target types, we have expanded the concepts of Command and Control Warfare into the broader scope of Information Warfare.

(~~TS-SCI~~) SIGINT plays a major role in identifying which adversarial information systems are the most profitable targets. It not only helps to identify any system weaknesses, it also identifies the intelligence gain or loss that might result from the exploitation of the targeted system. NSA provides most of this IW support directly to the Services. We work closely with the Services to identify those targets which merit IW concern.

we provide intelligence gain/loss assessments for targets being considered for disruption or destruction, and we assist with Battle Damage Assessments (BDA).



~~(TS-CCO)~~ As with SIGINT collection and processing initiatives, Information Warfare activities are driven primarily by the evolving telecommunications technologies of the target countries. Several elements of modern telecommunications systems are of significant interest to the IW community. Among these are:



~~(TS-CCO)~~ Each of these technologies provides a user with unique or tailored communications capabilities; each also has vulnerabilities which can be exploited for IW purposes. NSA and Service IW research and development efforts seek to identify both these IW vulnerabilities and the anti the SIGINT collection opportunities that exist in the telecommunications structures of target countries.

~~(TS-CCO)~~ NSA analysts have a key role to play in developing the basic target information which supports IW applications. The level of detail needed for successful IW uses is much different from that required in the past.

In addition, much of this information now goes directly to our IW customers and SCE partners. Currently they are supported either by hard-copy reports or by having access to selected databases. As their information needs increase, we expect to see a growth in the numbers of databases they will access directly; we may even see the creation of an IW-specific database. We may also see greater use of direct exchanges between Service and NSA analysts, including PCS assignments to Service IW Centers. In order to support these changes, NSA analysts will need training in the specifics of IW requirements; classes are already being planned and we encourage everyone to participate.

~~(TS-CCO)~~ Information Warfare promises to provide a new way of looking at familiar problems as well as a new set of tools for the war-fighter. NSA will be one of the main players in many future IW developments and our support will be critical to its future.