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# DAILY ENTERPRISE



## (U) HISTORY TODAY - December 22, 2015

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### (U) WW II cryptosystem decrypts and the Japanese naval code



(U) During World War II, access to information from decrypts of high-grade cryptosystems was severely restricted. Those who were privy to them had the responsibility to arrange cover for the actions taken. For example, commanders -- who already knew where their enemy was from decrypts -- would still order aerial reconnaissance. Even though this was superfluous from an intelligence standpoint, the enemy assumed Allied intelligence came from aggressive patrolling or reconnaissance, and was an important way to protect the real intelligence sources.

(U) The Allied leadership agreed that any one-time action, no matter how successful, would be disastrous if it gave away the extent of UK and U.S. exploitation of enemy cryptosystems.

(U) One exception to the restrictive policy, however, was submarine action in the Pacific.

(U) Historical photo: WW II-era submarine.

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(U) The Japanese had a wide network of merchant shipping to support the war effort. The "maru" not only transported troops and war materiel around the Central and South Pacific, they carried raw materials for support of industry in Japan's home islands. ("Maru" is a syllable attached to the end of civilian ship names in Japanese; it might be thought of as equivalent to "USS," used as a prefix on American vessels.

Although it was not a stand-alone word in Japanese, U.S. analysts often used it by itself to denote Japanese civilian or merchant ships.)

(U) Every day at noon, each maru had to send an encrypted location and status report to its headquarters. These reports were enciphered in a system known to U.S. cryptanalysts as the "2-4-6-8" system, based on its encryption matrix. It was also called "the Maru System" or the "Water Transport System," based on a literal translation of the Japanese characters for their shipping network.

(U) The Maru System was solved in January 1943, and thereafter the daily status reports became a rich source of detailed intelligence for the U.S. Navy. Information from these reports was sent directly to American submarines operating in the Pacific. The feeling was that this information was too valuable not to use directly, and, even if the source were compromised, this would not compromise the even greater secret that the U.S. was exploiting JN-25, the mainline Japanese Navy code.

(U) Jasper Holmes, who worked in the cryptanalytic center in Hawaii, later wrote: "The limited risk taken in allowing submarines to use liberally information from the Maru code was justified by the large potential gain. Intelligence, like money, may be secure when it is unused and locked up in a safe. It yields no dividend until it is invested."

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(U) The heavy losses inflicted on Japanese shipments of reinforcements and war goods by American submarines was a major factor in many battles in the Pacific campaign. The sinking of ships with raw materials for industry also degraded the Japanese effort to support its military overseas.

(U) To discuss historical topics with interesting folks, visit the Center for Cryptologic History's blog, [History Rocks](#) ("go history rocks").

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