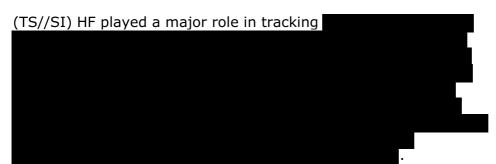**(U) The Evolution of HF**

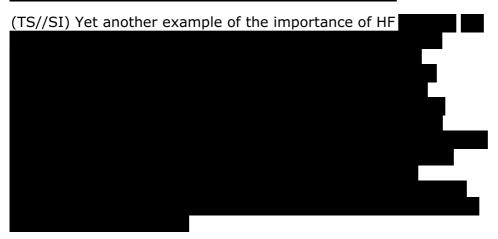FROM: ▮▮▮▮▮▮▮▮▮
Deputy Director for Data Acquisition
Run Date: 07/17/2003

(S//SI) A common misunderstanding, even among SIGINT professionals, is that "HF is dead." This belief, in part, is based on the fact that HF is one of the oldest means of communications, recently celebrating its 100-year anniversary. As newer technologies, such as satellites and fiber optic cables, were introduced as alternate means of communicating, it was believed that the market for HF technologies would disappear. This has not happened. In fact, the market for HF continues to grow.

(S//SI) Why is this? HF requires no terrestrial or spaceborne infrastructure to communicate globally and is capable of surviving the effects of a nuclear blast. HF is a low cost way to communicate and is often used when other traditional paths are denied to a user (usually in times of war). For as little as $5000, a state-of-the-art radio can be purchased that will enable the user to communicate in voice, send a fax, transmit data computer-to-computer, and even replicate a "STU" capability at distances of thousands of miles. HF radios are mobile, rugged, and require minimal manpower and training to operate-- ideal for use by terrorists and third world military organizations.

(TS//SI) As the United States was considering its options regarding a Security Council resolution on Iraq, intelligence derived from HF collection provided the position and voting intentions of several key players.

(TS//SI) HF played a major role in tracking ▮▮.

(TS//SI) Yet another example of the importance of HF ▮▮▮▮▮ ▮▮▮

(TS//SI) During Operation Iraqi Freedom, the importance of having

the ability to collect, geolocate, and process HF communications was most clearly demonstrated. As part of the planning for this war, CENTCOM developed a SIGINT herding strategy. Communications hubs known to be used by Iraqi military were identified and prioritized. The elimination of these hubs forced the Iraqis to establish alternate means of communicating. The alternate means of communicating very often became HF communications because of the reasons cited above. In this war one of the primary users of HF was Iraq's Air Defense visual observers (VISOPS) whose mission was to monitor and report on coalition aircraft over-flights and ground troop movements. VISOPS, as well as other air defense elements and Republican Guard elements, had been noted using HF communications extensively. Our ground troops leveraged this information for Indications and Warning (I&W;) and Force protection. As the war continued, we were well postured to address increases and trends in Iraqi HF activity.

(U//FOUO) Corporate HF Services (CHS) recently drafted a strategic plan that outlines the way forward for continued HF/UHF/VHF sustained collection. The plan calls for substantial changes to investment in both pay and non-pay. The investment in HF pay will be dramatically reduced as a result of automation and changing the way we do business. The investment in non-pay will increase to allow NSA to automate functions and catch up with advances in technology. A draft of the plan will soon be available on the CHS home page .

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