



***(TS//SI//REL) MHS and GCHQ “Get in the Game” with Target Development for World of Warcraft Online Gaming***



(TS//SI//REL) Although online gaming may seem like an innocuous form of entertainment, when the basic features and capabilities are examined, it could potentially become a target-rich communication network. Online gaming represents a technology that is rapidly growing in popularity worldwide. World of Warcraft (WoW) is one with an impressive following of gaming enthusiasts. With over 10 million users worldwide, WoW may be providing SIGINT targets a way to hide in plain sight. Targets have been spotted receiving “no reply” emails from gaming providers and GCHQ analysts have correlated known SIGINT targets to online gaming events. The New Mission Development Center at MHS, the Global Network Exploitation (OPD-GNE) and the Applied Research Special Topics (B18) organization at GCHQ are working together

to filter the FORNSAT survey environment for this traffic and extract various types of WoW metadata for SIGINT development and network knowledge enrichment.



(U) World of Warcraft

(U) Communication is at the core of online gaming and in WoW there are many ways to communicate and interact in the virtual world. A player has a character ID and can join different groups. A "party" brings players together for a common, defined purpose or quest. It is temporary and task-oriented. "Guilds," on the other hand, are for characters with persisting relationships and can take on an organizational structure with ranks and positions. The guild is more permanent and ideological. Characters can communicate verbally and non-verbally and may set up different types of channels to talk within a guild or privately, character to character.

(TS//SI//REL) GCHQ recently asked MHS's New Mission Development Center (NMDC) to support an online gaming research effort focusing on WoW. Eager to assist in a new potential area of target development, the NMDC discussed metadata needs with GCHQ in order to enable WoW target and network research in the FORNSAT arena. The NMDC engaged SNORT, an open source packet-sniffing software, which runs on all FORNSAT survey packet data, to filter out WoW packets. GCHQ provided several WoW protocol parsing scripts to process the traffic and produce Warcraft metadata from all NMDC FORNSAT survey. These logs are now being forwarded back to GCHQ for additional analysis, target development and network knowledge enrichment. By fusing information from different systems, databases, and resources GCHQ has correlated target entities to WoW logon events and continues to uncover potential SIGINT value by identifying accounts, characters, and guilds related to Islamic Extremist Groups, Nuclear Proliferation and Arms Dealing.

(TS//SI//REL) WoW certainly provides entertainment for a large number of people worldwide, but its gaming format can provide a virtual organizational platform for potential SIGINT targets as well. Furthermore, this technology can assist the target and simultaneously assist the SIGINT community in tracking that target. The WoW gaming infrastructure provides ample information for network development through the data passed during WoW messages, such as country and time zone information, local IP addresses and realm server addresses. In terms of active target development, there are clear parallels: traditional SIGINT development may follow emails, chat and buddy lists, whereas WoW target development may follow character IDs and logons, gaming communication channels and guilds.

(TS//SI//REL) MHS and GCHQ will continue to develop and collaborate on this potentially lucrative venue.