

Fig. 3. Demodulating received programmer (left) and ICD transmissions. The top plot in each figure shows the phase of the raw RF signal, downconverted from 175 kHz to baseband. Both 2-FSK and DBPSK encode data by the phase change of the signal, pictured in the middle row. The final row shows the decoded bits in 2-FSK the bit is determined by the sign of the phase change, and in DBPSK by whether is closer to 0 or  $\pi$ . Note that there are fewer bits than samples; our 500 kHz sampling rate generates 40 samples per programmer symbol and about 6 per ICD symbol.

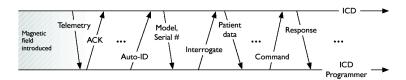


Fig. 4. Timeline of a conversation between an ICD programmer and an ICD. If a programmer is present it will acknowledge each packet automatically. When told by an operator to do so, the programmer asks the ICD for identifying information, which the ICD provides. The programmer then interrogates the ICD for patient data, which the ICD provides. Other commands (such as ICD programming commands) and their responses follow.

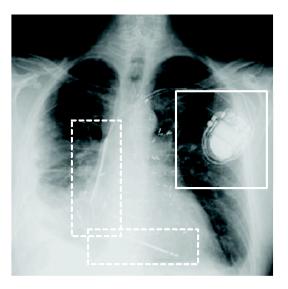


Fig. 1. Chest xray image of an implanted ICD (top right, near shoulder, solid outline) and electrical leads connected to heart chambers (center of rib cage, dotted outline).

## Hooligans Attack Epilepsy Patients During Epilepsy Awareness Month

Hooligans attack epilepsy support forum in an attempt to induce seizures amongst the members.

Houston, TX, November 19, 2007 -- (PR.com)-- Internet hooligans launched a malicious attack on Coping With Epilepsy (CWE), an internet web site that serves as a peer support network for people with epilepsy, last Saturday. The perpetrators flooded CWE with hateful messages, images of hardcore porn and, worst of all, animated images with rapidly flashing colors in an attempt to induce seizures in the photosensitive members (and guests) of the site.

## Hackers Assault Epilepsy Patients via Computer

by Kevin Poulsen ☑ 03.28.08



Internet griefers descended on an ep support message board last weekend JavaScript code and flashing compu animation to trigger migraine heads seizures in some users.

The nonprofit Epilepsy Foundation, the forum, briefly closed the site Sur purge the offending messages and to security.

"We are seeing people affected," say Lowenberg, senior director of web a publishing at the Epilepsy Foundati fortunately only a handful. It's possi people are just not reporting yet — p affected by it may not be coming bat forum so fast."

The attack lasted several hours as CV. 2 most action, many basis them photosensitive themselves, battled to remove the offensive content as fast as it was being posted. The attack ended when CWE administrators arrived and locked down the site.

"I was able to trace back the source of the attack to a handful of sites where the





Fig. 8. To simulate implantation in a human, we placed the WISP in a bag containing bacon and ground beef.

