

Abstract Submitted
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IED Countermeasures JAMES ZIEGLER, US Naval Academy — After the Iraq war started in 2003, within 15 months over 60% of the US casualties were being caused by a weapon that had never been significant in previous conflicts: the Improvised Explosive Device (**IED**). These are explosive mines that are mostly concealed at night near roads, and then detonated the next day when combatant vehicles are driven by. This talk will discuss the history of IEDs, and then concentrate on the use of IEDs in Iraq. The *political decisions* that may have led to the high fatality rate in Iraq will be outlined. Of note, contrasting political decisions in Afghanistan led to IED's causing fewer than 20% of the casualties there, although the number of IED's exceeded that in Iraq. Because of the terrible consequences in Iraq, with no effective available remedy, **IED Countermeasures** was proposed as ideal for student engineering research projects. Over five years, student work to develop a technology for "**Remote IED Deactivation without Detonation**" will be outlined (they were very successful !). They used high power beams of RF, electrons, protons and neutrons to attempt deactivation at a 100' distance. The final IED Neutralizer was very successfully field tested. (*This talk will contain graphic videos, and is not for the squeamish.*)

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