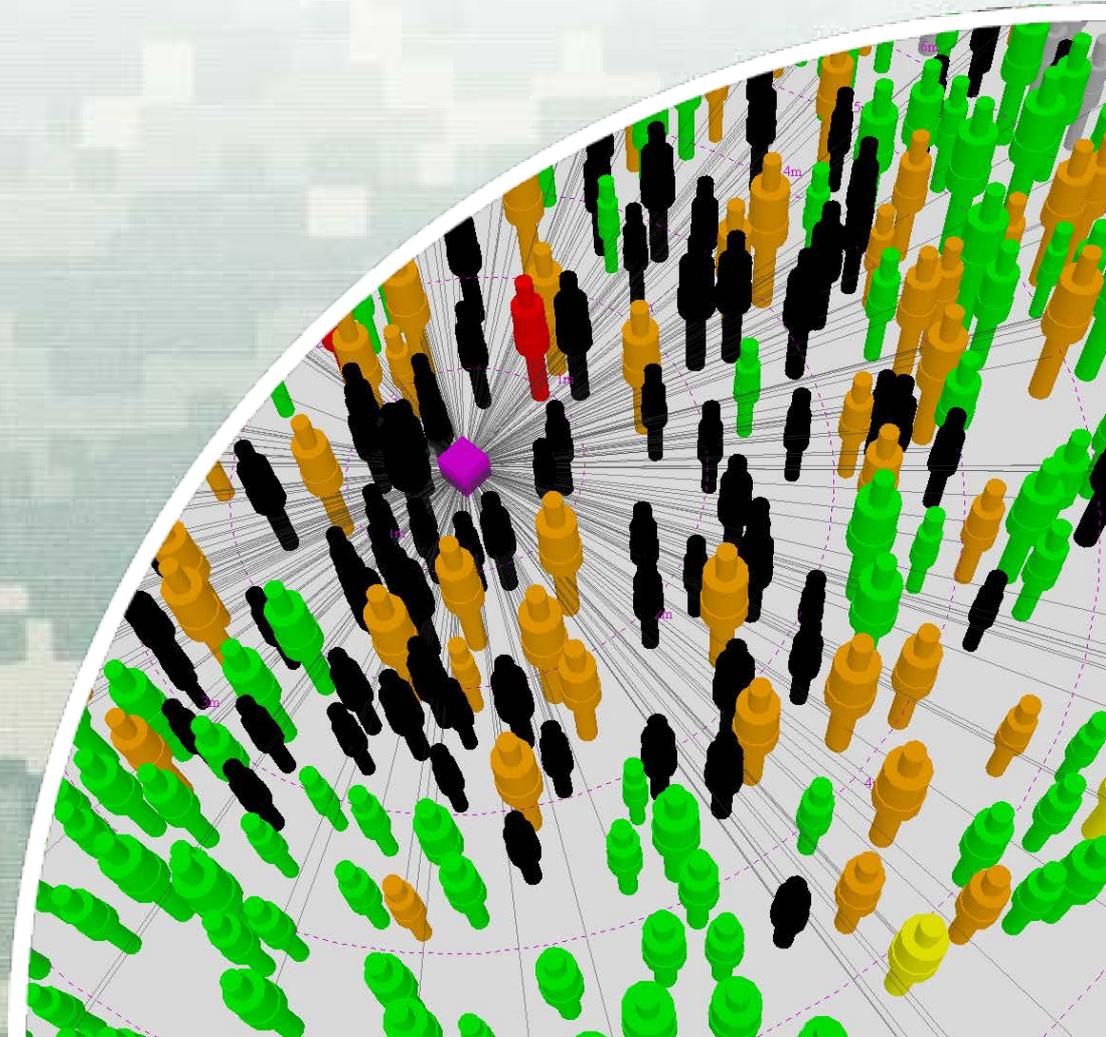


Improvised Explosive Device Casualty Prediction (IEDCP)



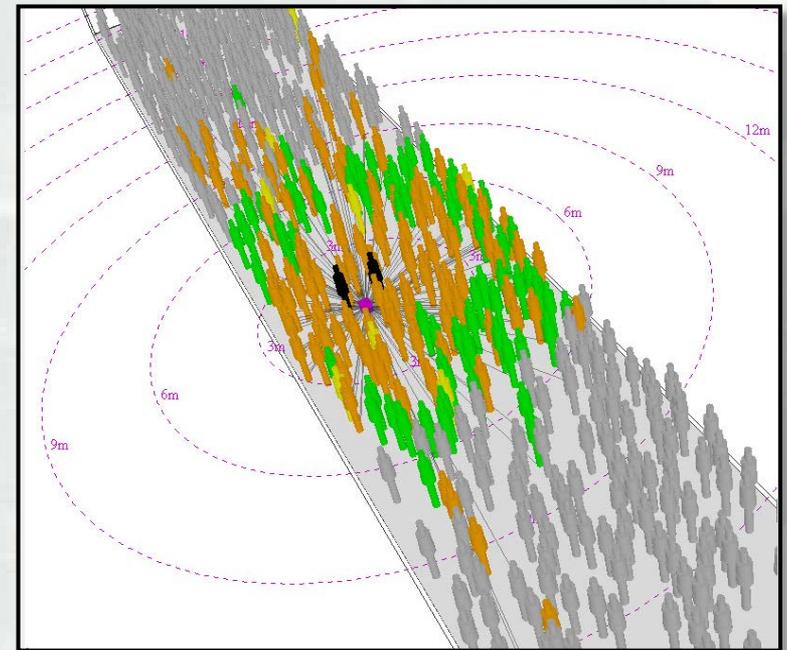
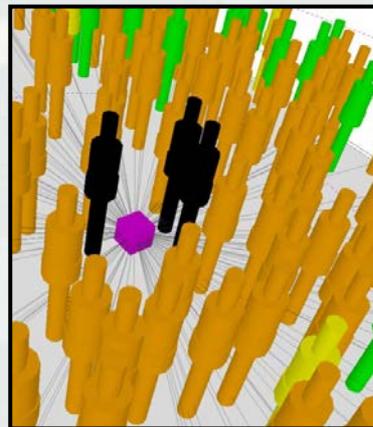
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Improvised Explosive Casualty Prediction (IEDCP)

- The Protective Design Center has the capability to predict the number of injuries or casualties given the bomb size, fragment type, and population density.
 - ▶ Define Space
 - ▶ Define Population
 - ▶ Define IED Properties
 - Ball bearings
 - Nuts
 - Bolts
 - Nails



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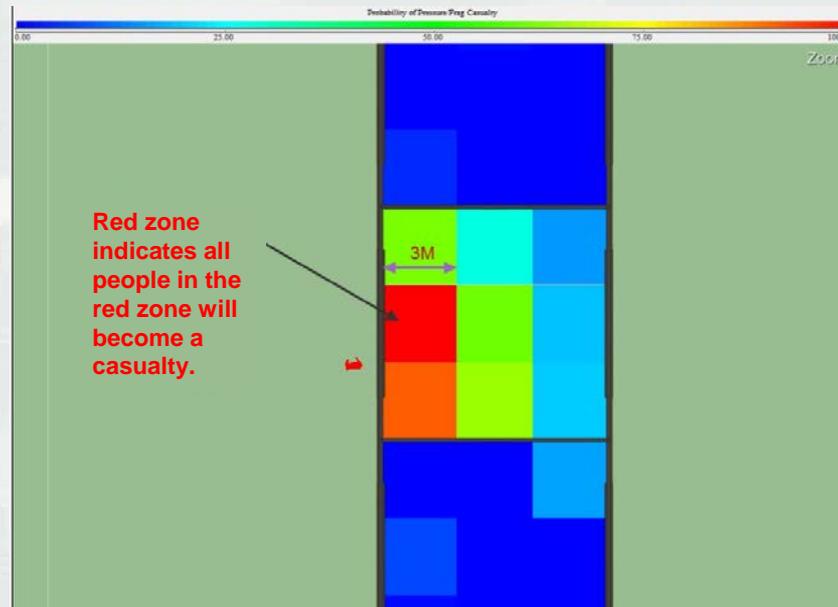
IED Casualty Prediction (IEDCP)

- IED Casualty Prediction is a good casualty and injury prediction tool for the public places such as dining halls; air, bus, train, and ferry terminals; parade grounds; conference facilities; air shows; sporting events; movie theatres; or anywhere else large groups of people gather.



Traditional Casualty Prediction Programs

- Traditional casualty prediction programs will only calculate the critical pressures and list them into the different areas (zones). This method does not take into account for the energy reduction of a fragment after passing through a media such as human flesh. Therefore, the prediction will not properly represent what can be expected in an actual event.



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Example: A home-made bomb (i.e., IED) detonated on a crowded side walk.

- Although, the IED is placed in a highly dense area, the number of casualties is relatively small: 3 casualties (objects in black)



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Prediction Comparison: IEDCP vs. Traditional Methods

Prediction Comparison

Modeling	Casualty	Serious Injuries	Moderate Injuries
IEDCP (more closely matches reality)	3	36	118
Traditional Methods	18	54	126

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Conclusion

- Direct questions regarding the Improvised Explosive Device (IED) Casualty and Injury Prediction (IEDCP) please contact PDC:

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