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Edited by Christopher Armstrong

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Volume 2: Night Vision Study

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Introduction

I am proud to introduce SAE International's fourth compendium of crash reconstruction papers. The last publication of this nature, PT-138, "Crash Reconstruction Research: 20 Years of Progress (1988-2007)", focused mainly on the topics relating to vehicle kinetics, kinematics, and the structural response of vehicle structures subjected to collisions. As was detailed in the preface to that publication, the first SAE technical compendium dedicated to the reconstruction of motor vehicle collision was PT-34, "Reconstruction of Motor Vehicle Accident: A Technical Compendium". That volume, as well as the second technical compendium, PT-35, was edited by Stanley Backaitis. All three of the technical compendiums compiled the best papers published by SAE through 2007 detailing the state of the art in the investigation and analysis of vehicular crashes.

These technical compendiums drew on the good work of the SAE's crash reconstruction community as represented by the technical papers published through the peer review process established by Terry Day and Ed Martinez. The current peer review process is overseen by select committees comprised of volunteers knowledgeable in the various aspects of crash reconstruction. The technical papers are vetted in the abstract stage by members of the committee after which the draft manuscripts are subjected to a double-blind peer review process utilizing three peer reviewers before being approved for publication. This process insures that each manuscript is critically scrutinized to insure scientific integrity and stands as a valuable resource for the collision reconstruction community.

The last ten years have seen explosive growth in the technology available to the collision analyst. This new technology has begun to change the way reconstruction is practiced in fundamental ways. The greatest technological advances for the crash reconstruction community have occurred in the realms of photogrammetry and digital media analysis. The widespread use of scanning technology has facilitated the implementation