



**PRESS RELEASE (June 19, 2019)**  
**Rebuilding Their Future Foundation, Inc.**  
**Formal Presentation by a Board Member**

On Wednesday, June 19, 2019, Board President Michael A. Trevits made a formal presentation at the 2019 Joint National Meeting and Training Seminar of the Joseph A. Holmes Safety Association in Virginia Beach, VA. The title of his presentation was “Development of an Underground Aerial Reconnaissance System Design to Assist in Mine Rescue”. The abstract of Mr. Trevits’ presentation follows.

*“In response to a major underground mine emergency, an Underground Aerial Reconnaissance (UAR) system would convey sensors into the mine prior to and/or ahead of entry by rescue personnel to provide timely, accurate, and reliable information upon which the mine rescue team can base their actions. The UAR could be used to make detailed measurement of underground atmospheric and ground conditions, assess the condition of mine ventilation controls, advance or re-establish damaged underground wireless communication or monitoring systems, and possibly locate trapped miners. An aerial system approach potentially offers a smaller, faster, more agile, longer range, and more economical means of information collection than ground-based reconnaissance options which may encounter impassible post-event conditions. Providing mine rescue teams with the ability to assess conditions well ahead of their current location should permit them to advance more rapidly and safely under circumstances where minutes may make the difference between life and death for any trapped miners. Four major subsystems have been identified as necessary to enable an effective UAR system: (1) an Aerial Vehicle Platform (AVP), (2) Underground Navigation, (3) Data Communications, and (4) Sensor Payload(s). A project was initiated through funding by the Alpha Foundation for the Improvement of Mine Safety and Health, Inc. to develop and demonstrate the feasibility of an appropriate design for the AVP necessary for effective overall UAR system performance. This presentation presents the technical approach to this project founded upon a thorough understanding and analysis of actual UAR mission requirements to develop a safe, mission-specific proof-of-concept AVP design.”*

Work under this project was conducted by Mr. Trevits, President of Xtraction Science and Technology, Inc., in conjunction with the United Mine Workers of America Career Center under grant AFC518-23 from the Alpha Foundation for the Improvement of Mine Safety and Health.