

SELF DEPLOYING INFRARED STREAMER

Kirk Neprud

Rescue Technologies Corporation



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Rescue Technologies Corporation

- Founded in 1997
- Home Base - Aiea, Hawaii
- Small Business Concerns
- RescueStreamer® products: 9
- Four Lives Saved

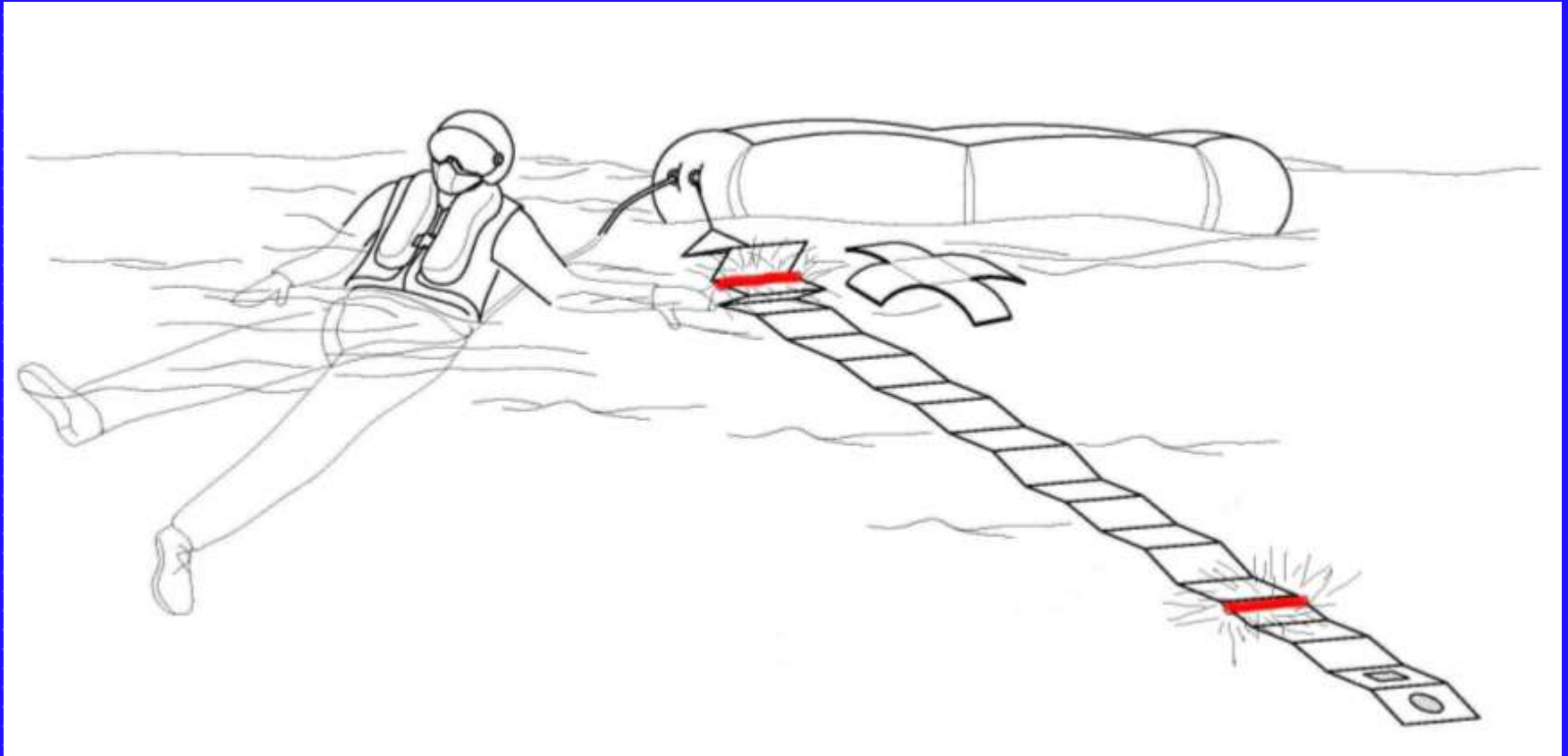


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Self Deploying Infrared Streamer

- Visual Relocation System
- Component Part for Seat Pan Survival Kit
- Independent Autonomous Operation
- Infinite Day Signaling Capability
- 5 Night (minimum) Signaling Capability
- Functional Stored Battery Life – 4 Years

Early Concept Drawing



SDIRS Success Attributed to SAFE Association

- SAFE Provided The Forum
 - Alamo and East Coast Chapters
- Iterative Team Effort
 - User Community Program Management
 - Industry Subject Matter Experts
 - Innovative Specialty Equipment Producer

SDIRS 5-Step Process

- Research
- Development
- Engineering
- Evaluations
- Administrative

Research

- Problem Identification and Analyses
- Define and Document Preliminary User Requirements
- Generate Solution Theories

Development

- Generate and Present Solution Concepts
- Revisit User Requirements
- Identify and Solve Potential Conflicts and Problems
- Refine and Finalize User Requirements
- Develop Engineering Prototypes

Assembled Engineering Prototype

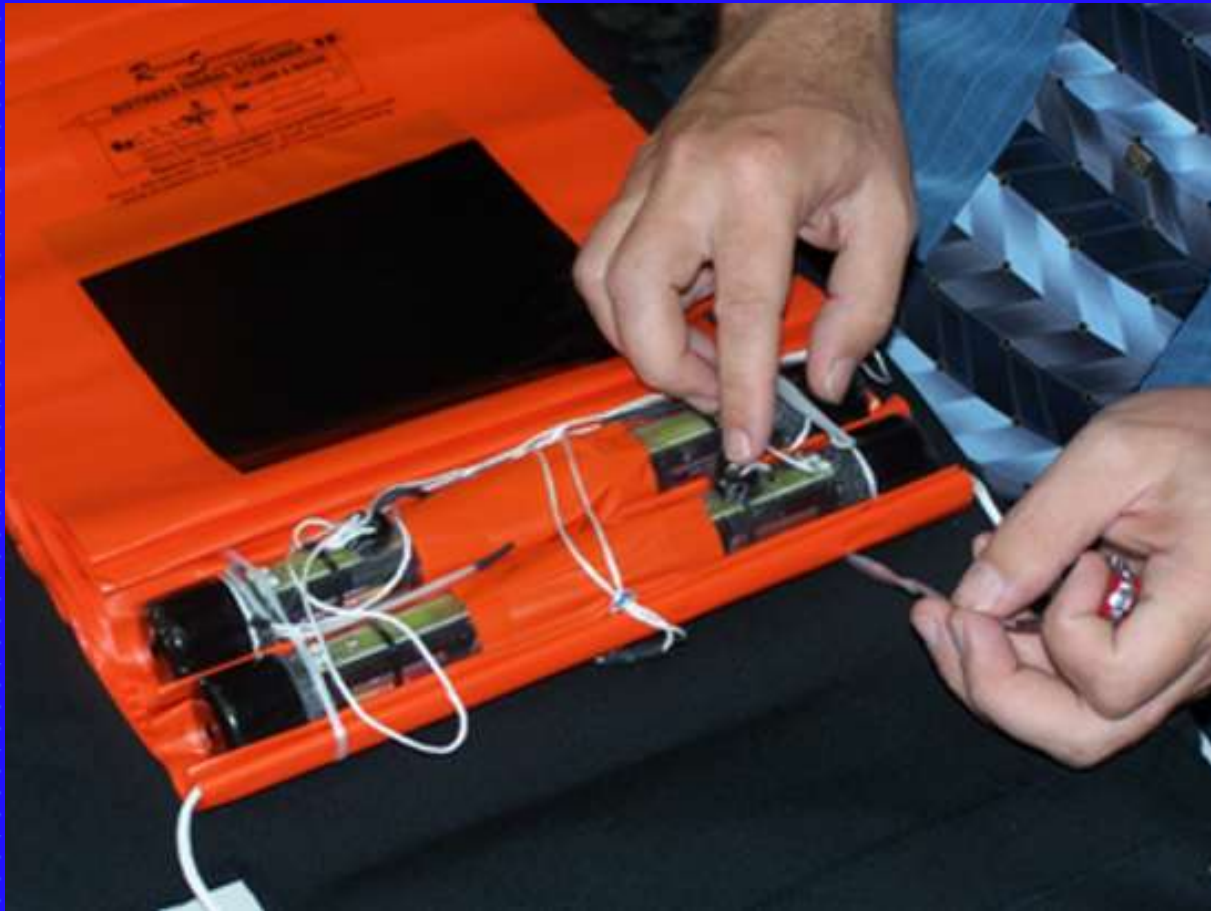


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Engineering

- Evaluate Engineering Prototypes
- Select Best Solution
- Integration Rigging and Test Fitting
- Draft Technical Orders and Procedural Integration Steps



Light Tube Integration Rigging During Engineering Phase

Evaluations

- Perform Standard Evaluations for Ejection Seat Pan Installation
- Detectability Performance
- Resolve Any Remaining Issues

SDIRS test jumps performed during evaluation phase of the process



SDIRS



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SDIRS

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SDIRS

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Current Status

Administration

- Administrative and Technical Review
 - Completed
- Recommendation for Final Approval
 - Completed
- Safe To Fly Authorization
 - 77th Aeronautical Systems Group
Brooks City-Base Texas

SDIRS Performance Capability

- Day Visual Acuity Indefinite Duration
 - 1.5 Miles at 2000' ASL

- Night Visual Acuity 5 Consecutive Night Cycles
 - 6 Miles at 3000' ASL

- Autonomous Independent Operation



SDIRS Autonomous Deployment Capability

SDIRS Autonomous Full Extension Achieved Without Survivor Assistance





Light Tube Evaluations: Pacific Ocean

Conclusions

SDIRS performance fills a gap in crew relocation capability that was identified as a contributing factor in a loss of life incident.

Day Example: Person with Life Vest. 500 feet ASL



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Day Example: Survivor after SDIRS deployment. 500 feet ASL



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Conclusions

SDIRS performance has been identified as a capability that will be used in other applications such as life rafts and survival kits for both aviation and marine applications.

Conclusions

The world-wide SAFE Association symposia is the catalyst that resulted in the operational viability of SDIRS.

Questions