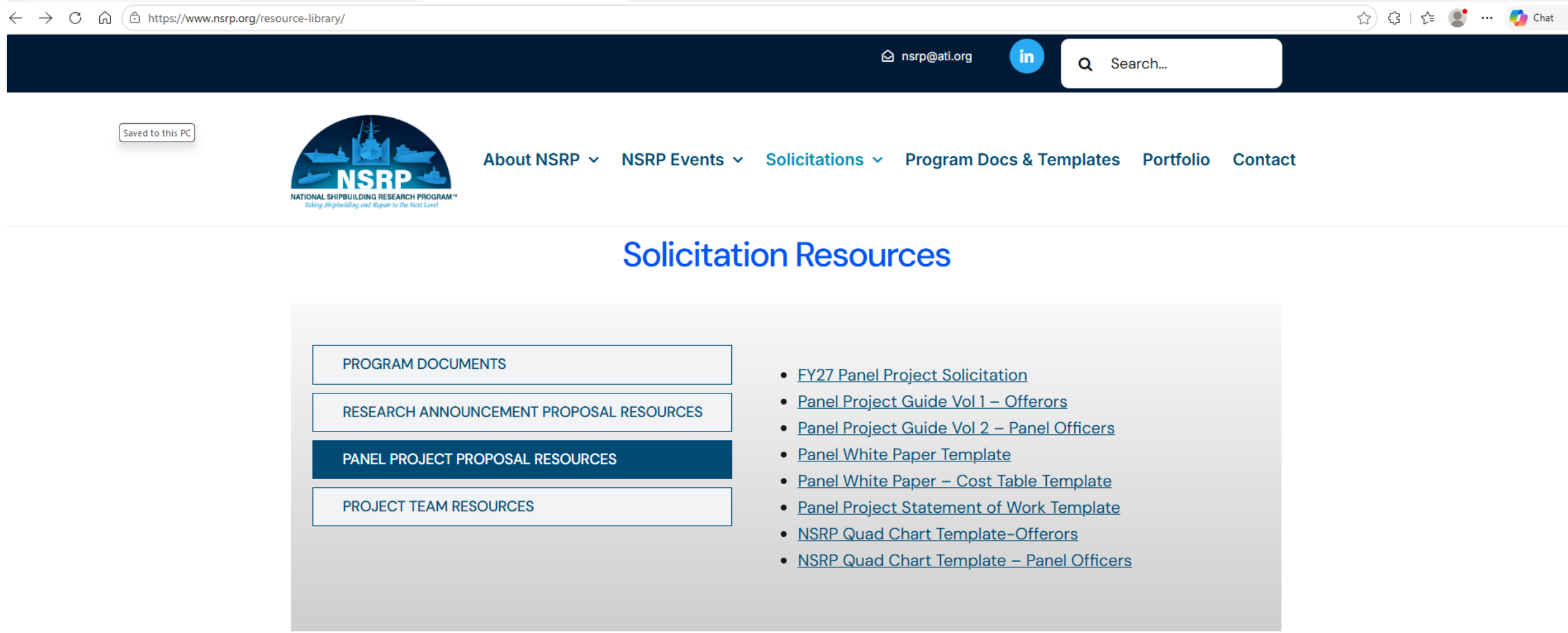
FY27 Panel Project Solicitation Overview/Ideas

2027 Panel Project Key Takeaways

- Panel Projects have a maximum 12-month period of performance with a ceiling of up to $200,000 in funding.
- Submissions must be in accordance with the latest Panel Project Guide Vol 1 – Offerors FY27 (dated May 19, 2026).
- White Papers shall be submitted within the ATI Acquisition Management Platform (AMP) site.
- Participation by one U.S. shipyard is required. Participation by multiple shipyards, including ECB member shipyards, is preferable.
- Panel Project White Papers addressing topics from the multi-year Strategic Investment Plan (SIP) as amplified by the annual Technology Investment Plan (TIP) will be of particular interest
- **Deadline for Offerors to submit White Papers to AMP is 4:00 p.m. ET on August 26, 2026**.
- Deadline for Panel Chairs to submit up to three White Papers and one joint White Paper to ATI is **4:00 p.m. ET on October 2, 2026**. Panel Chairs shall submit White Paper(s).
- Any Offeror whose White Paper is one submitted by a Panel Chair for ECB consideration must submit to ATI the Supporting Cost Data Table, as required by the Panel Project Guide – Vol 1 – Offerors FY27 (dated May 19, 2026), by **4:00 p.m. ET on October 9, 2026**.

NSRP Solicitation Resource Page



AiMiLi Inc

Smart Power & Adaptive Resilient Cable (SPARC) Platform for Retrofittable Sensor Deployment on Navy Combatants

Project Lead Organization: AiMiLi Inc.
Project Team Members: RSL Fiber Systems Inc. and Corning Inc.

Concept/Idea

Issue: Navy combatants need expanded sensing for Condition Base Maintenance Plus (CBM+) to monitor machinery health, electrical systems, fire prevention, and survivability. However, existing shipboard cable networks were **not designed as sensing backbones** and often lack the required SM/MM fibers, distributed sensing (DAS/DTS) fibers, power delivery, and access points needed for broad sensor deployment.

Proposed Solution(s): Develop SPARC, a hybrid smart cable that integrates SM/MM fibers, embedded distributed sensing fibers, and low-voltage DC power conductors in one shipboard cable. SPARC will support DAS, DTS, FBG strain sensing, electronic sensors, and Sensor-over-Fiber Networks through a common retrofit-ready cable backbone.

Benefits/Justification

Benefits of the Project:

- Reduces cost and disruption of shipboard sensor installation.
- Enables retrofit deployment through existing cable trays, conduits, and pathways.
- Combines power, communications, and sensing in one cable.
- Supports CBM+, machinery monitoring, fire prevention, vibration/acoustic detection, and structural monitoring.
- Provides a scalable architecture for future Navy sensor modernization..

Project Approach

High Level Statement of Work:

- Catalog ships' conditions to be monitored by DFOS.
- Evaluate fiber types required for ship-wide DFOS system.
- Configure cable design with considerations for compliance to applicable specification documents (M2042, M85045, M24640, M24643).
- Identify manufacturing process and estimated costs.

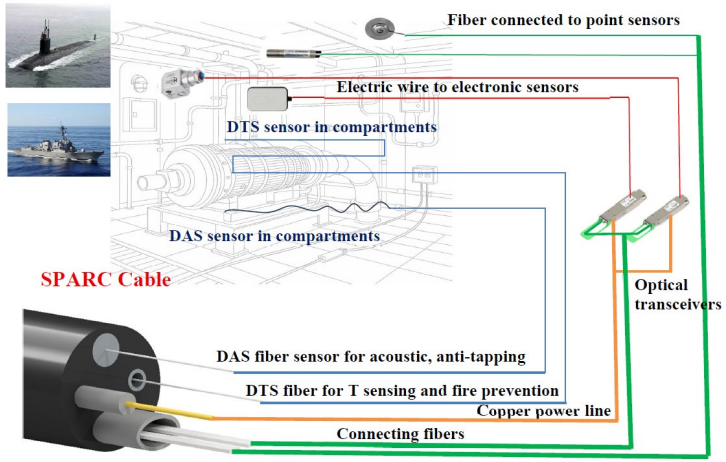
Metric(s) of Success:

- SPARC cable architecture defined, Candidate BOM and cable design completed.
- At least two shipboard use cases identified.
- DAS/DTS/FBG compatibility assessed.
- Manufacturing and cost model completed.
- Follow-on shipyard demonstration plan developed.

Cost/Images/Relevant Information

Project Estimated Cost:

- $ 200,000
- 1 year duration



AKTOptimize

Project Title: Accelerating Shipbuilder Training and Enabling Instant Recall Performance

Project Lead Organization: Accelerated Knowledge Transfer Optimize, LLC (dba AKTOptimize)
Project Team Members: AKTOptimize

Concept/Idea

Issue: Shipbuilder deficiencies in human performance caused by lack of understanding processes/procedures.

Proposed Solution(s): Interactive, stimulating and instantly accessible accelerated knowledge transfer (AKT) applications that enable shipbuilders to immediately understand new technologies and optimally perform first-time, complex and/or infrequently performed procedures; AKTs are intuitively/digitally accessed where and when critical training needs to be absorbed/applied.

Benefits/Justification

Benefits of the Project: AKTs and 3D Illustrated Parts Breakdown Viewers(IPBVs) with real-time configuration management ensure most accurate shipbuilder training / guidance and logistics support; approach would transform the way shipbuilding procedures and other work processes are performed in both DoW and industry; creates visual and cost-effective strategy for significantly enhancing technical publications; moves training from schoolhouse into working environment; significantly improves safety efforts in high-risk environments; and spearheads knowledge capture/transfer.

Project Approach

High Level Statement of Work: Identify key shipbuilder process (approximately 100 steps) human performance deficiency issue (caused by lack of understanding); clearly define procedures; capture, edit and program software demonstrating / transferring understanding that delivers optimum performance of those procedures.

Metric(s) of Success: reduced shipbuilder training and certification time; reduced time and cost to optimally perform procedures correctly first time without mishap.

Cost/Images/Relevant Information

Project Estimated Cost: $50,000 for development of AKT application addressing optimal shipbuilder performance of approximately 100 step procedure requiring two (2) full workdays of onsite video/scan capture with shipyard SME performance of key shipbuilder process.

Aura Technologies

Augmented Reality (AR) Assisted Inspection and Maintenance

Project Lead Organization: AURA Technologies
Project Team Members: Dr. Alex Blate, Dr. Gautam Upadhya,

Concept/Idea

Issue: Inspections for safety / corrosion, and performance of basic maintenance (Mx) tasks often require a highly skilled workforce who may be in short supply.

Proposed Solution(s): An AR-assisted technician can efficiently perform these tasks with less training when assisted by AURA's AR-solution. The AR headset will help to automatically detect evidence of corrosion and provide callouts and can guide technicians in performing complex Mx tasks.

Benefits/Justification

Benefits of the Project:

- Extensible to a range of skilled tasks: corrosion detection, safety inspections, Mx, predictive health monitoring, etc.
- Technicians can perform tasks while accessing relevant visual reference material hands-free (even accessing remote SME expertise via video recording/transmission
- Solution may be integrated with AI image analysis
- Overall increase in workforce capability with minimal additional resources

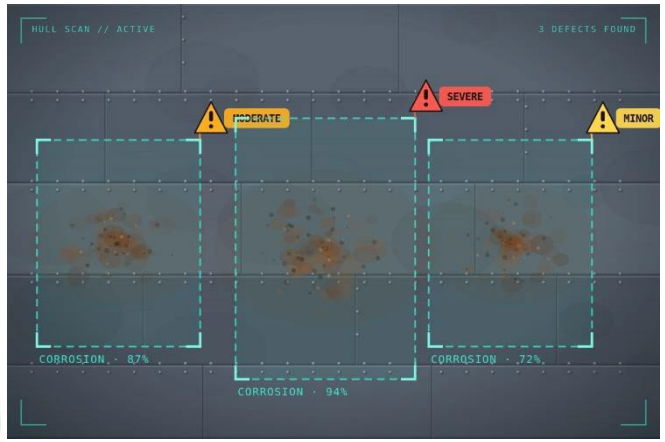
Project Approach

High Level Statement of Work:
Develop an AR solution for specific activities of interest to the NSRP such as: corrosion detection/identification, safety inspections, etc.
Phase 1 would include solution architecture, analysis of the specific technical tasks, and an outline of the AR-content to be developed. Phase 2 would include development of a full prototype.

Metric(s) of Success:
A minimally trained technician should be able to accurately and efficiently perform technical tasks using the AR-device.

Cost/Images/Relevant Information

Project Estimated Cost:
-**$200K** for initial effort to analyze technical tasks and outline AR-content + solution architecture.
-**$1M** for prototype development with AR content for a few tasks.



Conductor Fault Localizer

Project Lead Organization: AURA Technologies
Project Team Members: Zachary Barkley, Garrett Goss, Dr. Gautam Upadhya, Dr. Alex Blate

Concept/Idea

Issue: Large, complex shipboard electrical systems experience hard to locate faults leading to readiness degradation and costly additional maintenance hours**.**

Proposed Solution(s): Our handheld conductor fault localizer (developed for the Navy's EMALS) can be adapted for use on other complex shipboard systems with hard-to-find faults.

Benefits/Justification

Benefits of the Project:

- Works on complex electrical systems where time-domain reflectometry fails
- Increased readiness and availability of ship systems
- Massive reduction in maintenance troubleshooting hours
- Portable and rugged handheld device that doesn't require ECP to implement

Project Approach

High Level Statement of Work: Adapt our existing technology for one of the many other complex electrical systems aboard Navy ships, such as the Advanced Weapons Elevator (AWE) onboard Ford class carriers.

Metric(s) of Success:

Localization of electrical faults to within 30 feet within 15 minutes for faults under 5K ohms.

Cost/Images/Relevant Information

Project Estimated Cost:

- **$200K** for initial assessment of target electrical system, including feasibility study and solution architecture
- **~$500K-$1M** adapting our existing technology into a NSRP-specific prototype solution

Background: AURA developed the handheld fault detection device for the Navy's EMALS (under SBIR). The TRL 6 solution has been proven in the Navy's testbed environment. The device is custom built, ruggedized, and uses an AI/ML model developed in house to localize faults. By updating the AI/ML model, the solution is extensible to other complex electrical systems.

HII Newport News Shipbuilding

Project Title: Flexible Infrastructure Benefit Assessment Study

Project Lead Organization: HII Newport News Shipbuilding
Project Team Members: HII Ingalls Shipbuilding

Concept/Idea

Issue: Sporadic feedback on the Flexible Infrastructure Support System has been captured by the Ford Class HPY through collaboration with AITs, no in-depth effort has been performed to capture the ROI of the Navy's significant investment in this technology

Proposed Solution(s):

- Assess the capability of Flexible Infrastructure (FI) to ensure on-time maintenance, modernization and sustainment of Navy ships and systems, maximizing readiness and availability for fleet tasking, IAW NAVSEA's Enterprise Strategy core Line of Effort (LOE).
- Collaborate with Shipyards, Hull Planning Yards, and Alteration Installation Teams (AITs) to identify by discipline where major benefits of FI are realized.

Benefits/Justification

Benefits of the Project:

- Provide data to Navy Programs that reflect the cost & schedule impact to system upgrades or changing missions through the inclusion of flexibility in the ship's design.
- Enable Design Agents to identify by subsystem which FI subsystems offer maximum benefit based on compartment functionality .
- No known work performed to capture and report this data for any of the multiple Navy platforms that have implemented this technology.

Project Approach

High Level Statement of Work: Assess the benefits of FI on Navy Programs cross-platform. This effort will capture data from ship alterations and compile it to inform Navy Programs and Shipyards where the FI Technology provide maximum benefit and ROI

Metric(s) of Success:

- Provide Navy Programs with a benefit assessment of FI that supports data-driven decisions to optimize the technology benefits.
- Develop a Flexible Infrastructure Support System matrix that assess the value of FI by system and space functionality to inform the Design Agent in implementation strategies. .
- Project Final Report

Cost/Images/Relevant Information

Project Estimated Cost:

- Program Funds: $200K
- Cost Share: $0
- Duration: 12 Months

Project Title: Modular Overhead Grid System Applicability Assessment

Project Lead Organization: HII Newport News Shipbuilding
Project Team Members: HILIT North America

Concept/Idea

Issue: How to reduce the significant industrial effort to install Overhead Protective Grid Systems in Weapons Magazines onboard Navy platforms

Proposed Solution(s):

- Implement HILTI Corp. new MT Overhead Grid System into Universal Weapons Magazine as the OVHD Protective Grid & Adjustable Telescopic Batten System.
- Analyze/Test the HILTI Corp MT System mechanically attached configuration for shock and eliminate the current welded system.
- Maximize the implementation value by focusing on HILTI MT components that meet shipboard system requirements at a reasonable cost.

Benefits/Justification

Benefits of the Project:

- Reduced skilled trade man-hours and cost associated with building universal weapons magazines on Navy platforms
- Eliminate significant hot-work/inspection points/ re-work onboard the ship through the implementation of mechanical attachments & COTS components
- Potential to interface attachment applications for services electrical/piping/ventilation into the overhead grid
- Potential benefits cross-platform.

Project Approach

- **High Level Statement of Work:** Evaluate HILTI Corp. new MT Overhead Grid System for applicability onboard Navy platforms. Universal Weapons Magazines will be a major focus due to the construction labor/inspection associated with the current welded Overhead Protective Grid System. Other potential applications will be investigated.

Metric(s) of Success:

- Develop & provide NAVSEA an OQE data package for the HILTI Overhead Grid System defining load capabilities and approved shipboard applications.
- Compiled component level data that aid design agents in optimizing the design/configuration for weight & cost to enhance implementation opportunities.
- Vendor training/demonstration of components and tools utilized in industry and onboard NATO ships to transfer knowledge and best practices to shipbuilders in HILTI Overhead Grid System installation.

Cost/Images/Relevant Information

Project Estimated Cost:

- Program Funds: $200K
- Cost Share: $0
- Duration: 12 Months

Karman Space and Defense

High Performance Non-Metallic Fasteners for Marine Applications

Project Lead Organization: Karman Space and Defense

Project Team Members: Wade Henery, Nick Rudenko, Luke Colone, Simon Chung

Concept/Idea

Issue: *Marine fasteners require high performance while resisting corrosive impact in humidity and saltwater environments.*

- Current solution utilizes Titanium or Inconel fasteners which are expensive and have long lead times
- Off the shelf plastic fasteners do not meet performance needs

Proposed Solution(s): *High Performance Composite Fasteners and Inserts via high-end fiber filled molding compounds*

- Use of carbon filled/glass filled (long and short) fiber PEEK, PEI
- Molded at near net-shape for increased performance
- Modular Mold design for low-cost , rapid design changes , and customization

Benefits/Justification

Benefits of the Project:

- 20-50% lower costs than titanium or Inconel fasteners
- More sustainable than specialty alloy fasteners
- Rapid customization for specific thread types, lengths
- Highly engineered to maximize performance
- Ideal for fastening under underwater and/or highly corrosive environments (e.g, mine-countermeasure vessels, submarines)
- The Global Marine Fasteners Market is projected to expand from USD 3.66 Billion in 2025 to USD 5.03 Billion by 2031

Project Approach

High Level Statement of Work: Scale-up and Automate previously developed injection molded fastener and insert system

- Prior fasteners demonstrated and delivered to the Navy at low production rates
- Further cost reduction and lead times can be achieved via production molds, and automated machining and inspection techniques

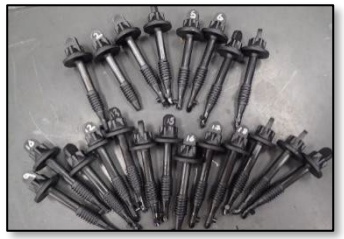
Metric(s) of Success:

- 20-30% reduced cost and lead time to current injection molded fasteners
- Achieve production rates and times to meet current and future Navy needs

Cost/Images/Relevant Information

Project Estimated Cost:

$200K, 12 months



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RSL Fiber System, LLC

Fiber Optic Cable Integrity Monitoring System (2027 PP)

Project Lead Organization: RSL Fiber Systems, LLC
Project Team Members: [NSWCDD, NAVSEA, PSU EOC, TBD Shipyards]

Concept/Idea

Issue: Fiber breakage during cable installation is detected only after fibers are terminated, creating high labor and material costs for replacement.

Visual fault locators require termination of individual fibers.

Proposed Solution(s): Secure a fiber visual fault locator to one end of the cable being pulled to continuously monitor all the fibers at once from the pull end.

Benefits/Justification

Benefits of the Project:

- Reduce labor cost of replacing cable with broken fibers by identifying breaks as soon as they occur during cable pull.
- Eliminate the labor cost to terminate and check each fiber individually to detect breakage.
- May provide a visual indication of fibers undergoing stress at installation by detecting the dimming light output.

Project Approach

High Level Statement of Work:

- Develop a rapid basic termination for an input bundle combining 4F or 8F to couple visible light into all fibers at once.
- Develop a rapid termination method for 4F and 8F at pull end to separate fibers and see light emitted from each.
- Modify a commercial visual fault locator to couple to input fiber bundle and attach to cable during pulling operation.

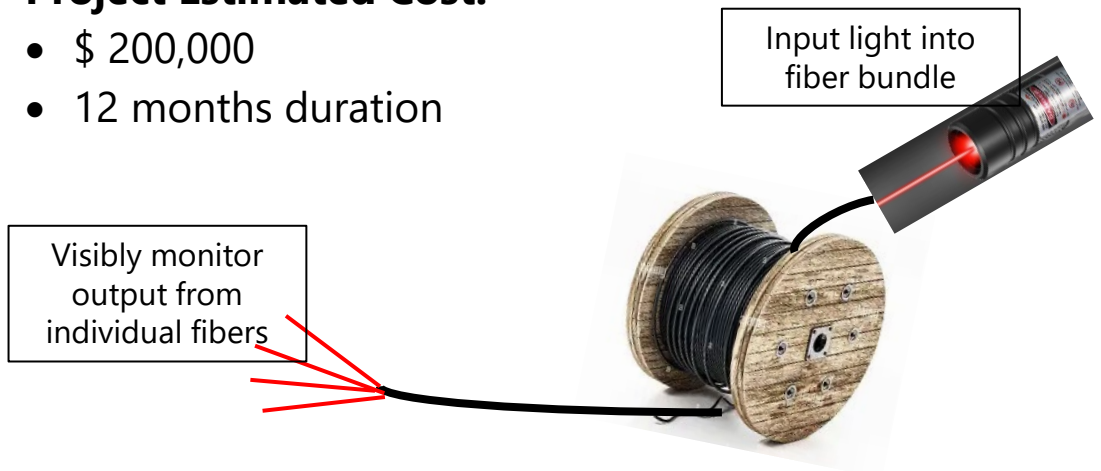
Metric(s) of Success:

- Termination is quick and can be performed with basic tools.
- Light from both SM and MM fibers is clearly seen from pull end of cable.

Cost/Images/Relevant Information

Project Estimated Cost:

- $ 200,000
- 12 months duration



Others