Welcome to the TaNCAD Wiki!

The Tactical Networked Communication Architecture Design (TaNCAD) lab at NPS focuses on developing advanced network architecture, protocols, and test/analysis tools for challenged communication environments, particularly those found in the tactical domain. TaNCAD is based at the Naval Postgraduate School in Monterey, CA.

Research Projects

- Golocation-Aware DTN Routing
- DTN Technical Readiness
- USMC NOTM DTN Integration
- DTN-cum-IP Integration

News

IMC Accepts

Rohrer, Justin (CIV) posted on Jul 31, 2018

I am pleased to report that our IMC submission was accepted! (https://conferences.sigcomm.org/imc/2018/ https://conferences.sigcomm.org/imc/2018/) (Preprint available at: https://arxiv.org/abs/1805.11308 https://arxiv.org/abs/1805.11308) This is a large-scale IPv6 topology mapping effort, aimed at understanding the effect of target selection on infrastructure discovery. Abstract: Existing methods for active topology discovery within the IPv6 Internet largely mirror those of IPv4...

Lab Meetings

Location: GE-B10

- 2018 – 06 December: Status updates
- 2018 – 29 November: Status updates
- 2018 – 15 November: Status updates
- 2018 – 08 November: Thesis (Strelkoff) and status updates. Relevant sections >>

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Members

Faculty

- Dr. Justin P. Rohrer – GE-118
- Dr. Robert Beverly – GE-110
- Dr. Geoffrey G. Xie – GE-125

Staff

- Mr. Michael Monahan – IN-104
- Mr. Carl Prince – GE-120
- Mr. Riqui Schwamm – GE-237

Students

Current

- Mr Unknown User (junliang.chan.sn) (Summer 2020)
- LCDR Unknown User (benjamin.harper) (Spring 2020) – Effects of GPS error on geographic routing protocols
- LTJG Samuel Strelkoff (Fall 2019)
- Mr Michael Monahan (Summer 2020) – DTN Implementation measurement and instrumentation

Former

- LT Carlos Hargett (Spring 2019)
- Maj Unknown User (belogan) (Spring 2019) – SDN Automation of Distributed Firewalls
- LT Jason Brown (Fall 2018) – Machine learning-based DTN routing
- LTJG Garret Walton (Fall 2018) – Rule-based training for reinforcement learning
- LT Kyle Hunter (Fall 2018) – IPv6 tar pit stickiness and scalability improvement
- LT Ryan R. Ferrao (Spring 2018) (Outstanding thesis, Surface Navy award) – Masked underwater acoustic communication
- Mr Dillon Glasser (Spring 2018) – Longitudinal Study of Large-Scale Traceroute Results
- LT Andrew Mauldin (Fall 2017) (With distinction, outstanding thesis, Grace Hopper award) – Comparative analysis of disruption tolerant network routing simulations in the ONE and ns-3
Robustness to Error in Transmission 60-65
Possible Solutions for Error Propagation 65-67
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Packet Design
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NERDP System Evaluation 104-109
Integrity and Availability Vulnerability Assessment 111-112

- 2018 – 01 November: ITC paper presentation (Brown) and status updates
- 2018 – 25 October: IMC paper presentation (Beverly) and status updates
- 2016 – 18 October: MatPlotLib demo and status updates
- 2018 – 11 October: Paper (Hargett) and status updates
- 2018 – 04 October: Status updates
- 2018 – 11 September: ns3 demo (Brown) and status updates
- 2018 – 04 September: mininet demo (Hunter) and status updates
- 2016 – 28 August: Status updates
- 2018 – 21 August: Screen demo and status updates
- 2018 – 14 August: Git demo and status updates
- 2018 – 31 July: LaTeX demo and status updates

CTP Brian Weaver (Summer 2017) – Analyzing U.S. Army Internetwork Anomalies with Split-Protocol Graphs
LT Alexis Pospischil (Winter 2017) – Mapping ad hoc communications network of a large number fixed-wing UAV swarm
LT Dan Lukaszewski (Winter 2017) – Multipath transport for virtual private networks
CTP Brian Greunke (Spring 2016) – Distributed emulation in support of large networks
Mr Sean McKenna (Winter 2016) – Detection and classification of Web robots with honeypots
Ms Leslie Shing (Winter 2016) – An improved tarpit for network deception
LT Dan Woodman (Winter 2016) – Crowdsourcing physical network topology mapping with net.Tagger
Mr Jonathan Yee (Winter 2016) – Characterizing crowd participation and productivity of foldit through web scraping
LT Kevin Killeen (Summer 2015) – GAPR2: a DTN routing protocol for communications in challenged, degraded, and denied environments
Mr Weiyou Phua (Summer 2015) – Detection of active topology probing deception
MAJ Scott Fortner (Spring 2015) – Multi-resolution playback of network trace files
CTP Erik Rye (Spring 2015) – Evaluating the limits of network topology inference via virtualized network emulation
LT Lance Alt (Summer 2014) – Application transparent HTTP over a disruption tolerant Smart-Net
CTP Matthew Weant (Fall 2013) – Fingerprinting reverse proxies using timing analysis of TCP flows
LCDR Todd Sehl (Spring 2013) – The Viability of a DTN System for Current Military Application
MAJ Jon Petersen (Summer 2012)
LT James Barber (Spring 2012)