

# 10 Years of GRRIT/NAIT Partnership



**February 23, 2021**

# 10 Years of GRRIT/NAIT Partnership

## LEGEND

- **BTECH:** Bachelors of Technology in Technology Management
- **BET:** Biomedical Engineering Technologist
- **DMIT:** Digital Media and Information Technology
- **BAIST:** Bachelors of Applied Information, Science, and Technology
- **CIM:** Centre for Innovative Media

The goal of the partnership is to give NAIT Capstone students real world industry projects and practical experiences related to the medical/rehab field.

## GRRIT/NAIT Partnership is mutually beneficial:

- NAIT receives practical and educational capstone projects for their students
- GRRIT receives prototypes which help support clinical needs.

## Other Benefits of Partnership

- Lead to strong engagement with GRH front line clinicians
- Lead to commercialized products and research opportunities
- Offers practical experiences to post-secondary students
- An opportunity to transform conceptual projects into useable products and prototypes

## NAIT Faculty Engagement

- **DMIT:** 4 Faculty Members through Capstone and Program Chair
- **BTECH:** 5-7 Faculty Members through Capstone and Program Chair
- **BET:** Program Chair
- **CIM:** 3 Programmers, Program Lead, and Program Manager
- **Other:** 3 Faculty and Staff through Applied Research

# 10 Years of GRRIT/NAIT Partnership

## NAIT Student Engagement

- **BTECH:** 4-500 student hours per project
- **DMIT:** 2-300 student hours per project
- **CIM:** Project dependent hours, usually ~40hr weeks for 12 weeks/student

## GRH/GRRIT Engagement

- **GRH Clinicians:** 1-3 1hr meetings with NAIT Teams. 1-2 1hr meetings with Technical Lead.
- **Technical Lead:** 1hr meeting per project weekly or bi-weekly. 1hr meeting per project w/ departments. 3-5 hours of presentations per term.

## Responsibilities

Program	Tech Leader	GRH Clinicians	NAIT Faculty
BTECH	Subject Matter Expert Liaison Sign off on Funding	Subject Matter Expert Project Generation	Project/Team Oversight Grading
DMIT	Subject Matter Expert Liaison Teaching/Mentoring Project Architecture	Subject Matter Expert	Project/Team Oversight Teaching/Mentoring Grading
CIM	Subject Matter Expert Liaison Sign off on Funding	Subject Matter Expert	Project Team Oversight Subject Matter Expert Day-to-day Oversight
Other	Subject Matter Expert Liaison Sign off on Funding	Subject Mater Expert Project Generation Client Liaison	Project Team Oversight Subject Matter Expert Day-to-day Oversight

Projects engaged GRH clinicians in physical therapy, occupational therapy, recreational therapy, feeding & swallowing, audiology as well as nursing. The Technology Service Leaders in both physical and occupational therapy worked closely with the teams in answering questions and coordinating meetings and discussions between NAIT Teams and GRH clinicians as required.

## 10 Years of GRRIT/NAIT Partnership

**\$20,000** top up funds annually based on the projects approved and completed in the previous year

### GRH Overall 10 year Financial Commitments

All projects are capped at \$10,000.

- **\$58,100 for BTECH**
- **\$500 for BET**
- **\$3-5,000 for Other**
- **\$41,877 for CIM.**
- **Total: ~\$103,000-105,500**



# 10 Years of GRRIT/NAIT Partnership

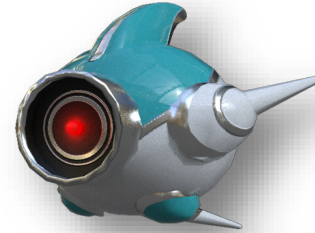
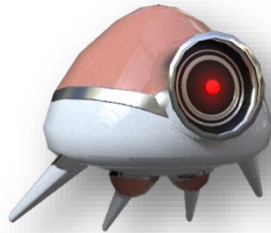
**65** projects completed across **3** schools and **6** programs, as well as engagement with NAIT CIM.

BTECH Projects	
<p>Generally, our projects with BTECH are well received. Two projects have led to commercialization; another 3 have commercial potential. Some projects reached end of life or were unsuccessful, but have paved the road for future projects. Many projects are pending next steps because COVID caused delays.</p>	
19 Total Projects:	Current and Pending Projects
<ul style="list-style-type: none"> <li>• 2 Commercialized Projects</li> <li>• 4 Projects In Use</li> <li>• 3 Projects reached End of Life</li> <li>• 1 Failed Project</li> <li>• 5 Projects awaiting next steps</li> <li>• 4 Projects ongoing in-house</li> <li>• 1 Project active with BTECH</li> </ul>	<ul style="list-style-type: none"> <li>• Virtual Tour Package – Current Project</li> <li>• Wayfinding Application V2 – Pending</li> <li>• Laptop Carts – Pending</li> <li>• Wheelchair Obstacle Course - Pending</li> <li>• Patient Scheduling System – Rework</li> <li>• Muscle Tester - Rework</li> <li>• Lite Brite – Rework</li> </ul>
In Use Projects	Not in use
<ul style="list-style-type: none"> <li>• Touch Table – Commercialized as ReTouch with Rehabtronics</li> <li>• FEPS – Near commercialization as FEPSim with KARMED</li> <li>• Therastairs – In Use at the GRH</li> <li>• Nursing Tracker – In Use at the GRH</li> <li>• Amp Bench – In Use at the GRH</li> <li>• Adult Weight Sled – In Use at the GRH</li> </ul>	<ul style="list-style-type: none"> <li>• Portering Scheduler – End of Life</li> <li>• Asset Inventory – End of Life</li> <li>• Wayfinding Application V1 – Failed</li> <li>• Balance Board - Incomplete</li> <li>• Spinal Space and Storage – Feedback submitted</li> <li>• Scoliosis Database – End of Life</li> </ul>
Cumulative Costs	
<ul style="list-style-type: none"> <li>• Touch Table - \$10,000</li> <li>• Thera Stairs - \$8,000</li> <li>• Amp Bench - \$5,000</li> <li>• Patient Scheduling Software - \$9,000</li> <li>• FEPS - \$8,300</li> </ul>	<ul style="list-style-type: none"> <li>• Adult Weight Sled - \$4,000</li> <li>• Wayfinding Application - \$800</li> <li>• Lite-Brite - \$9,000</li> <li>• Balance Board - \$2,500</li> <li>• Muscle Tester - \$1,500</li> </ul>

# 10 Years of GRRIT/NAIT Partnership

## DMIT Game Design Projects

Generally, our projects with DMIT are well received. Most projects that have reached End of Life have either been redesigned or we've moved to other technologies.



### 28 Total Projects:

- 10 Projects In Use
- 7 Projects that reached End of Life
- 1 Incomplete Project
- 4 Projects Not in Use
- 3 Projects Exploratory in nature
- 2 Project actively being Redesigned 1 Project in an unknown state

### Current and Pending Projects

- HoloLens Exploration: Exploratory
- Touch Exploration: Exploratory
- Kinect Exploration: Exploratory
- Glenrose Gourmet: Redesign

### Projects In Use

- Drill Game
- Tree Falls
- Balloon Pop Redesign
- Card Match Redesign
- Whack-A-Mole Redesign
- Shape Shifter Redesign
- Marble Quest Redesign
- Smash Up Derby V2
- Squish the Fish V2
- Handjutsu

### Not in use

- Smash Up Derby V1 – End of Life
- Squish the Fish V1 – End of Life
- Alien Attack – End of Life
- Hockey Nation – End of Life
- Marble Quest – End of Life
- Cubed – Incomplete
- Collector – Not in Use
- Master Match – Not in Use
- Firelight Tales – Not in Use

### Cumulative Costs

No costs associated with projects other than Technology Leader time.

# 10 Years of GRRIT/NAIT Partnership

## DMIT WEB/APP/ BAIST Projects

Generally, our projects with DMIT are well received. Most projects that have reached End of Life have either been redesigned or moved to other technologies.

### 5 Total Projects:

- Accessible Math App V1 – End of Life
- Accessible Math App V2 – Not in Use
- Ling 6 Sound Tests – Extensively used. Possibly End of Life
- Amputee Education App – End of Life
- Virtual Home Visit App - Redesign

No costs associated with projects other than Technology Leader time.



# 10 Years of GRRIT/NAIT Partnership

BET and CIM Projects	
<p>BET projects are to provide BET students with great real world work experience. CIM projects have been well received by GRH clinicians and a number have been or are currently in use with patients. Video Projects are unknown at this time.</p>	
8 Total Projects:	Project Status
<ul style="list-style-type: none"> <li>• 1 Project In Use</li> <li>• 3 Projects reached End of Life</li> <li>• 1 Project Incomplete</li> <li>• 1 Project Not in Use</li> <li>• 1 Project in development with CIM</li> <li>• 1 Project in an unknown state</li> </ul>	<ul style="list-style-type: none"> <li>• SADIE– End of Life</li> <li>• Walker Sensors – End of Life</li> <li>• Elbow Brace – Incomplete</li> <li>• Stunt Plane Redesign – End of Life</li> <li>• GlenRaid – In Use</li> <li>• Rainy Day – Active</li> <li>• Assorted Video Projects – Unknown</li> <li>• Accessible Foot Joystick – Not in Use</li> </ul>
<p>Footmouse Project failed due to communication challenges.</p>	
Cumulative Costs	
<p>Funding includes matching funds from NSERC (\$13,877 &amp; \$28,000).</p>	
<p><b>BET</b> SADIE - \$500</p> <p><b>Other</b> Accessible Foot Joystick - \$3-5,000</p>	<p><b>CIM</b> GlenRaid - \$13,877 Rainy Day - \$28,000</p>

## Next Steps

We currently have projects underway with both DMIT and BTECH, but few projects for the September BTECH intake. We currently have no word from BET whether they'll be running a capstone this year. We are currently awaiting results for a CCSIF Grant application with CIM.

Future costs will depend on what projects we choose to undertake with CIM and BTECH.

**If you have an idea for a NAIT student project please contact Michael Cimolini at [Michael.Cimolini@ahs.ca](mailto:Michael.Cimolini@ahs.ca)**