

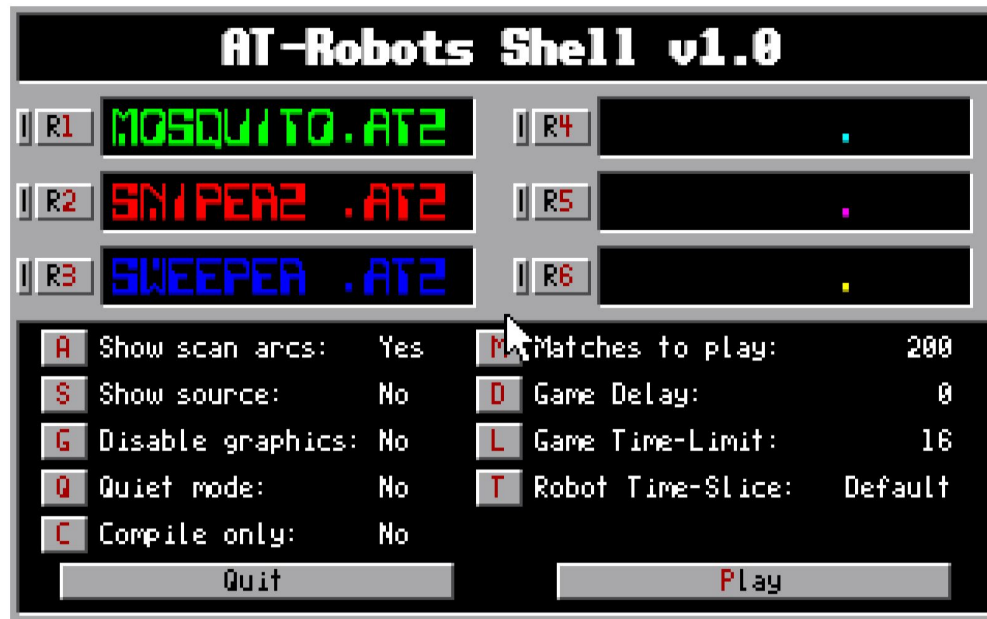
Architectural Spike

Team Cerebral

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Introduction

- Our group has decided to base our port in C++



Features

What we have in progress:

- Develop a basic GUI
 - Listing/opening robots from directory
- Convert ATR Lock to C++
- Synthesize sound
- Keyboard events

What we didn't accomplish yet:

- Drawing objects
- Moving objects

Tools and Process

- Qt Creator
- We had a peer review process to code the ATRLock program
 - We each worked on a section and reviewed the others' work



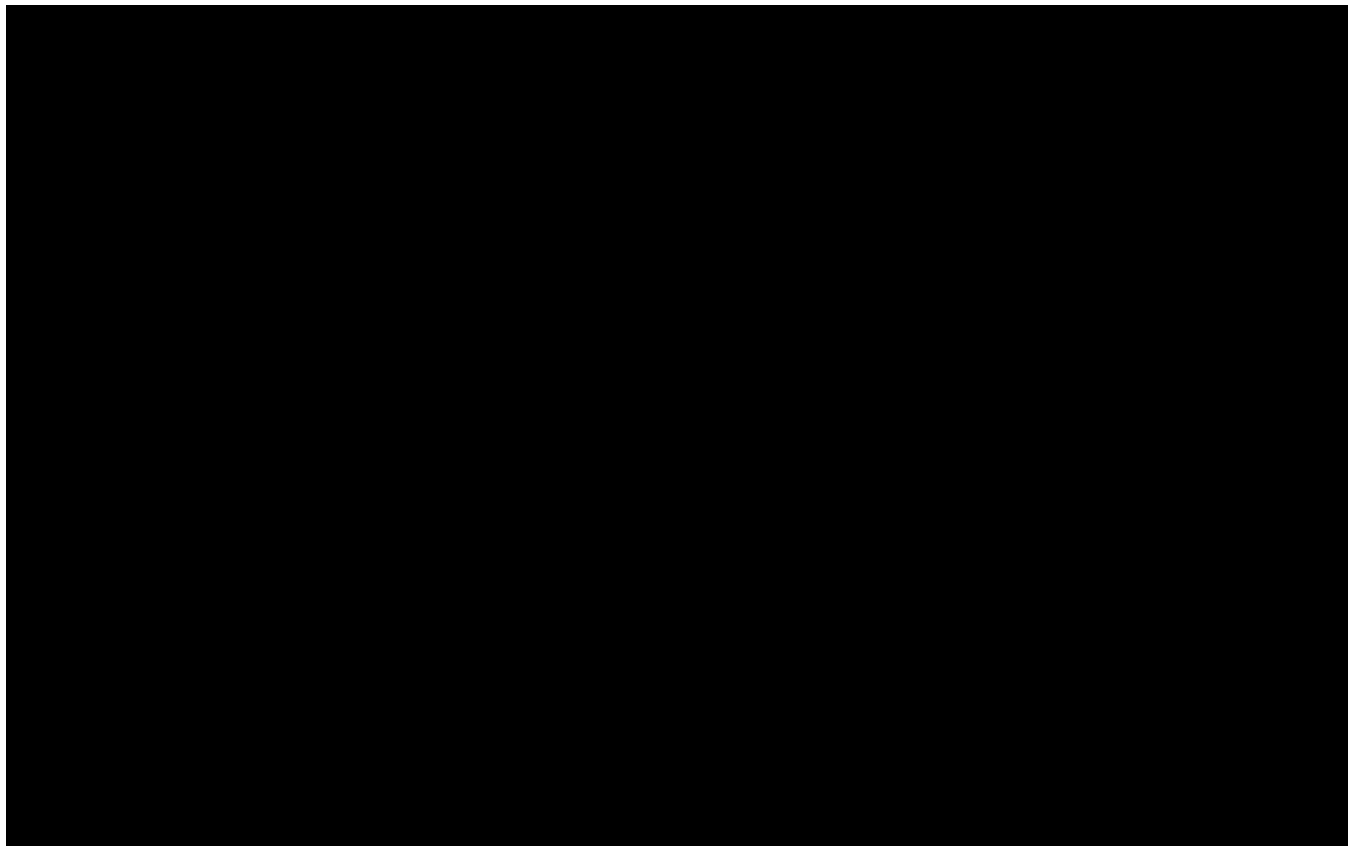
Demos

- ATR Lock Program demo in C++
- Basic GUI developed using Qt
- Command line sound demo

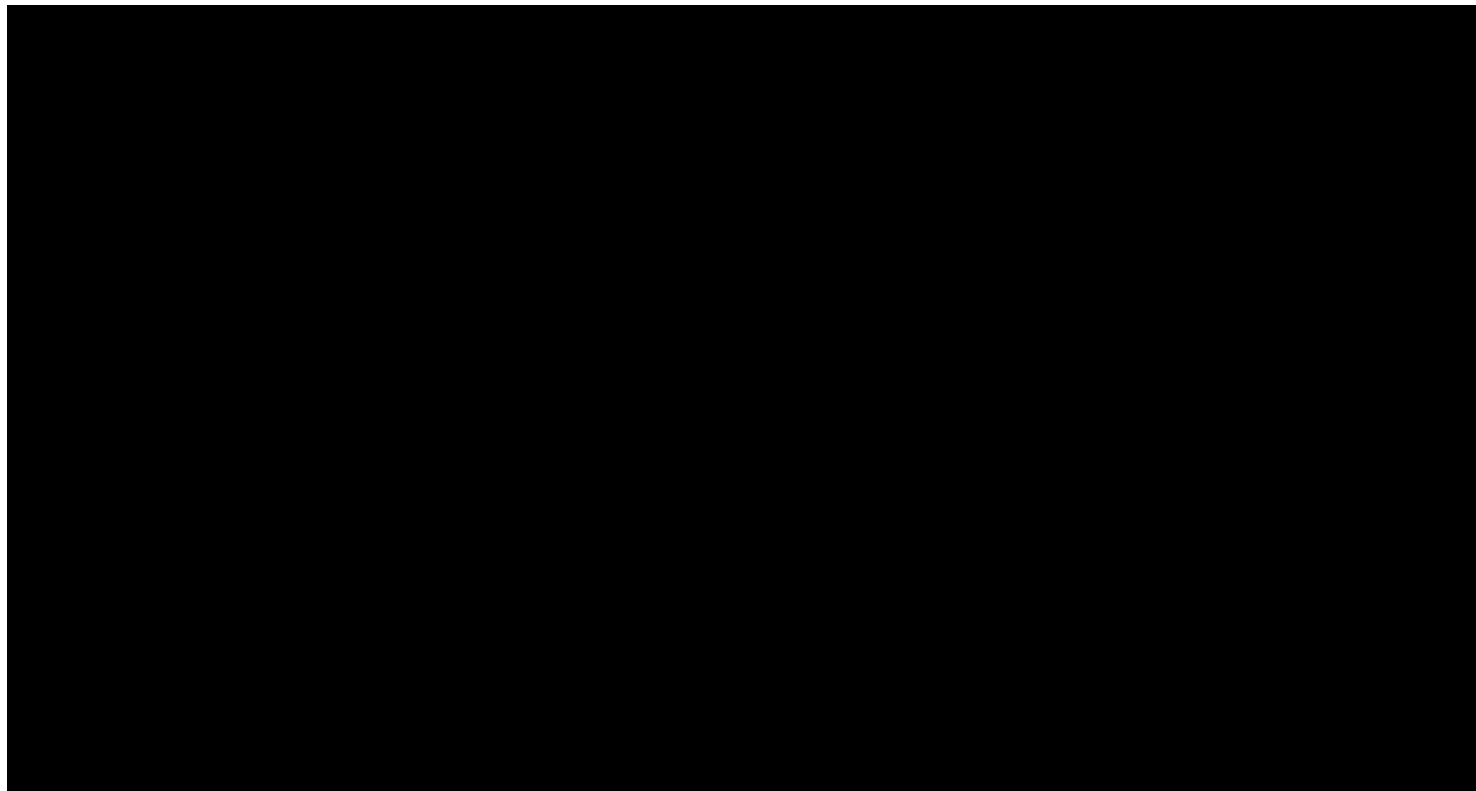
ATRLock

```
STRAIGHT.ATL x
1 ;-----
2 ; TEST ROBOT:
3 ; Put this against sduck and see what happens
4 ; in non-graphics mode.
5 ; *Bones* perhaps you can get better debug info
6 ; with this more specific problem :-)
7
8 ;-----
9 ; STRAIGHT.AT2 Locked on 2018/2/5
10 ;-----
11 #LOCK3 BNDAS`OKNUJ\HYWJTF^_PPHKLUG\OVNKFVR
12 CZR&=6,.>
13 #NCN]
14 JG$5,.M[
15 LPQ$BY*028;4
16 KHS!"HFDL
17 KXS%1?.-1
18 GOV$-ODBS
19 #GJNI
20 L\](26%0A3
21 BZR&=8*.N1
22 M\](26%0A3
23 BZR&=8*.N1
24 M\](26%0A3
25 EM&!AAA_
26 HHL%-ODBS|
27
```

ATRLock GUI



Basic Sound Demo



Plans

Original:

- Translate ATR Lock program to a fully functional C++ program.
- Develop a more modernized GUI for the ATR Lock program.
- Create and move objects.
- Synthesize sound, random sound and event based sounds.
- List/Open Robots from directory



Modified:

- We changed from originally planned wxWidgets to Qt Creator
 - wxWidgets was too complicated/outdated to work with, required extra user effort to compile

Future Plans

- Reading commands from robot files
 - Moving robots
 - Shooting
 - Turning/rotation
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- Reduce redundancy in original ATRobots code
 - Condense ATRobots code