April 22, 2013

Team 19 Phase 2 of Inspection

**Laboratory # 8: Inspection**

**Morgan, Laura**

**Miaw, Jireh**

**Hauser, Steven**

**Dworak, Catherine**

**Bertoglio, David**

***Work Product***

**Documentation of Phase 2 of Inspection of Group 20’s source code**

***Document Revision Information***

**April 22, 2013 – Document created, Phase 2 inspection documented**

**Approval Sheet**

**All group members whose names are listed below approve of the document and contributed fairly.**

**Member Names**

**Morgan, Laura**

**Miaw, Jireh**

**Hauser, Steven**

**Dworak, Catherine**

**Bertoglio, David**

By this approval sheet we attest to the quality and completeness of Phase 2 of the inspection.

**Pledge**

**On my honor, as a student, I have neither given nor received unauthorized aid on this assignment.**

**Names**

**Morgan, Laura**

**Miaw, Jireh**

**Hauser, Steven**

**Dworak, Catherine**

**Bertoglio, David**

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## Inspection Schedule

Phase 2 – Coding practices

Sunday April 21, 2:00-4:00 p.m.

Inspector – Laura

## Checklists Used

### Phase 2

Coding practices (single inspector).

* Switch statements
  + Switch statements used rather than if-else-if blocks
  + Every switch statement has a break in each case statement
* Variables
  + All variables initialized prior to use
  + All variables declared at top of function
  + All loop variables initialized just before loop
  + No variables initialized that are not used
* Classes
  + All classes have complete set of get() and set() methods
* Bounds
  + All arithmetic checked for ranges within bounds
  + All loop bounds are correct
* Methods
  + All method arguments are used in method
  + All functions named after what they return
  + All procedures named after what they do
* Conditionals
  + Complexity of conditionals should be avoided
  + All relational operators correct (> vs >=)
  + Executable statements not included in conditionals
* Miscellaneous
  + No public data
  + Every file is included in given file uses
  + All file open commands checked for failure
  + Type conversion done explicitly

## Results of Inspection

* Switch statements
  + Switch statements used rather than if-else-if blocks
    - *BaseStation lines 72-92: If-else-if block should be switch-case block*
    - *GUI lines 468-700: if-else-if blocks should be switch-case blocks*
* Variables
  + All variables initialized prior to use
    - *GUI lines 246 & 247: txtConnectionButtonOn and txtConnectionButtonOff background set before textFields initialized (lines 257 and 265)*
    - *GUI lines 525, 543, 560, 577: wIsPressed, aIsPressed, sIsPressed, dIsPressed used in conditionals before initialized – consider initializing them all to false in initialize()*
    - *GUI line 652: Boolean isSent never initialized*
    - *GUI line 470: int speed used before initialized on line 475*
  + All variables declared at top of function
    - *BaseStation line 71: String message declared in middle of function*
    - *BaseStation line 216: byte[] checksum should be declared at top of function*
    - *GUI line 643: Boolean valueHolder declared twice (also declared on line 25)*
  + All loop variables initialized just before loop
    - *BaseStation line 30: Initialize readFlag on line 62 (just before loop) rather than at declaration*
  + No variables initialized that are not used
    - *GUI line 28: private static GUI window never used*

## Observations

Phase 2 of the inspection has been completed. Defects sent to Team 20 on 4/22/2013.

Note: Auto-generated GUI code was not inspected as thoroughly, as directed by Instructor.