

Data analysis of Insect flight behavior

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Oak wilt

- Recently, oak wilt is spreaded by Beetle “*Platypus quercivorus*”(Fig.1) (Kuroda et al., 2012) .
- Protecting by inserting medicine to tree, covering tree with plastic sheet, and so on (Fig.2) (Saito, 2002) .
- But each protecting is not enough, because of oak wilt is spreading too huge range area.



Fig.1: *Platypus quercivorus*



Fig.2: (A) Inserting medicine(B) covering with plastic sheet

Flight-Mill

1. Applying cold anesthesia by ice pack
2. Bonding beetle and arm
3. Fiting arm to Flight-Mill
4. Flying beetle, arm is moving

Electric signal to Photo sensor
From LED .
Plastic part prevent signal.
Then it change signal voltage and
Flight-Mill sense a turn(Fig.3).

Measuring speed and distance
(Fig.4).

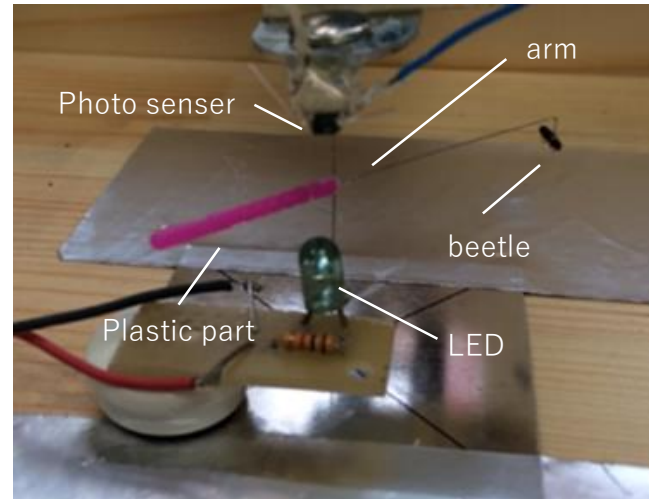


Fig.3: Flight-Mill

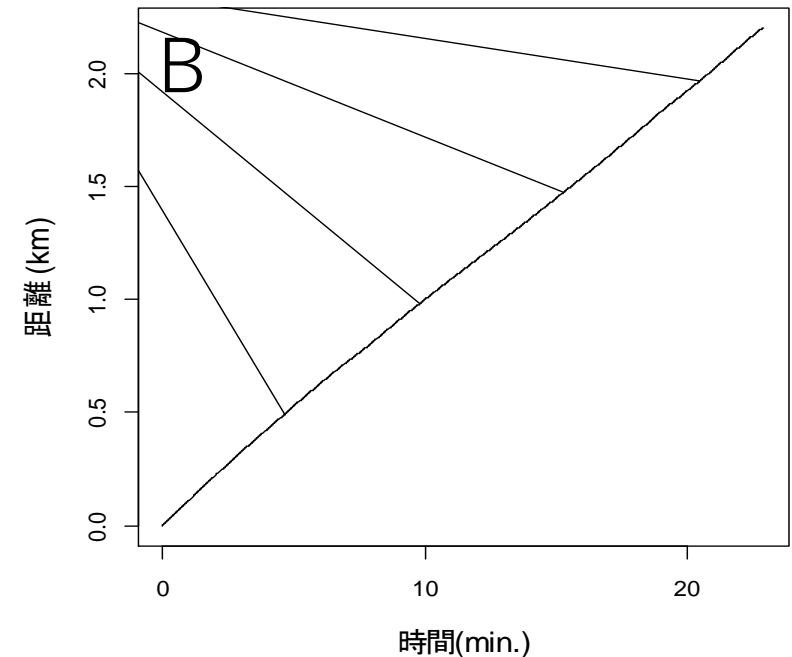
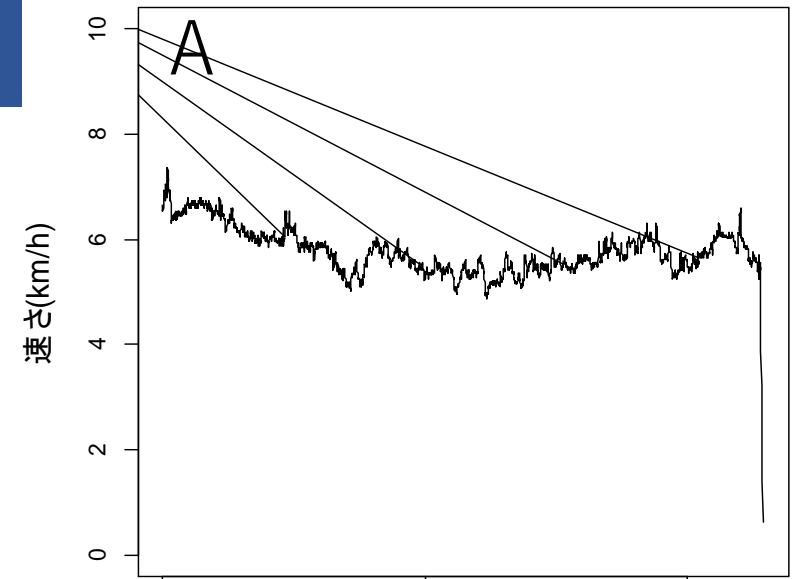


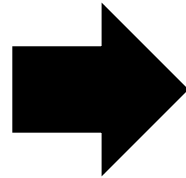
Fig.4: measuring data (A) speed
(B) distance

Process(previous)

Preparing

- Making directory
 - “output” folder
 - “concat” folder
 - “concatF” folder

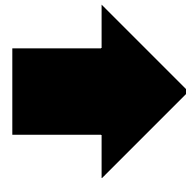
Change directory name



“2019output” folder
“2019concat” folder
“2019concatF” folder
(after all process)

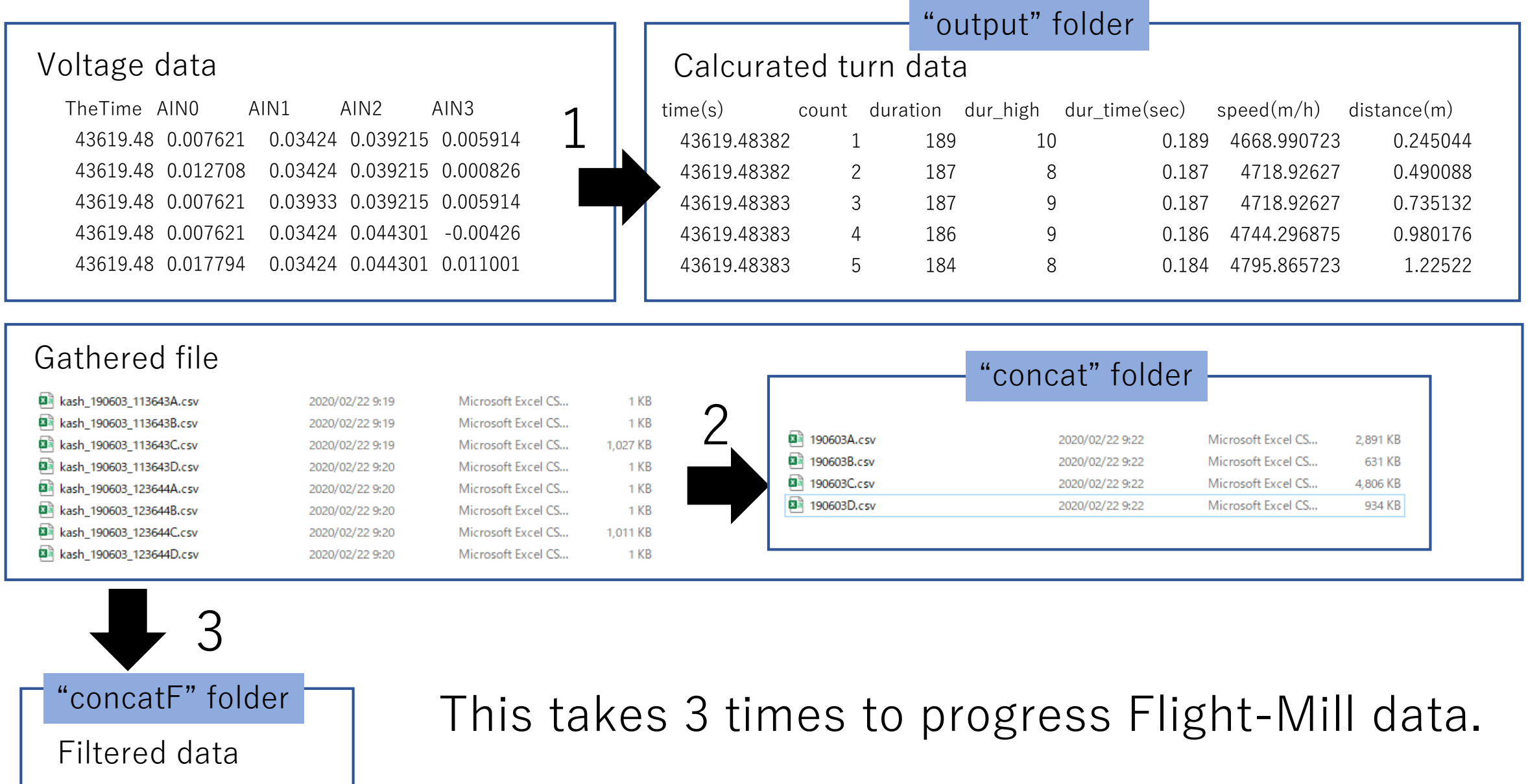
-
- Gcc compile C-file
 - “dA3-Ljnew”.c
 - “concat3-LJ”.c

Compile



“dA3-Ljnew”.exe
“concat3-LJ”.exe

Process (previous)



What I did

