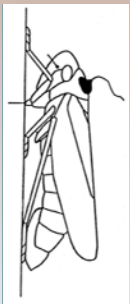


Trimmer

- This section is optional and controversial.
- The problem
 - All recordings end, and the end is usually caused by human intervention. If the insect is in waveform E2 at the end, it is expected that the insect would have continued in E2 for some undefined period of time had the recording continued. In this case, E2 is an artificially terminated event.

EPG
Work-
shop





Controversy

- The artificially terminated event will bias your data. In some cases it will bias your data even if you delete it.
- The controversy is over whether to keep or delete these events.
- The correct approach depends on the insect and the limits of equipment and research methodology. A more complete discussion will be presented elsewhere.
- Trimmer deletes these events.



Conditions

- Trimmer follows these rules:
 - Given a cut-off time that you provide, trimmer will delete all events that end after this time except as follows:
 - If the ending event is NP it will be retained.
 - If there are additional behaviors after the cut-off time, the behavior that starts before the cut-off and ends after the cut-off will be retained.



Using Trimmer

- Find the shortest duration in the file.
- Start by opening PsyllidData I.csv in Excel.
- Type this into cell D2, and fill down.

`=IF(A2=A1,C2+D1,C2)`

- Type this into cell E2, and fill down.

`=IF(A2=A3,"",D2)`

- Type this into cell E1, and record the answer (82772.94) or 22.6 hours.

`=min(E2:E2500)`



Caution

- You can run Trimmer with this value, or you can delete the insect from the data file.
- In cell F2 I can type this and fill down.
`=IF(E2=EI,“Any Text You Want Here”,“”)`
- I scroll down to find that the insect b7 has the shortest value.
- I can delete the value in cell E529 and see that my new minimum is 84065.72 (22.97 hours)



Decision

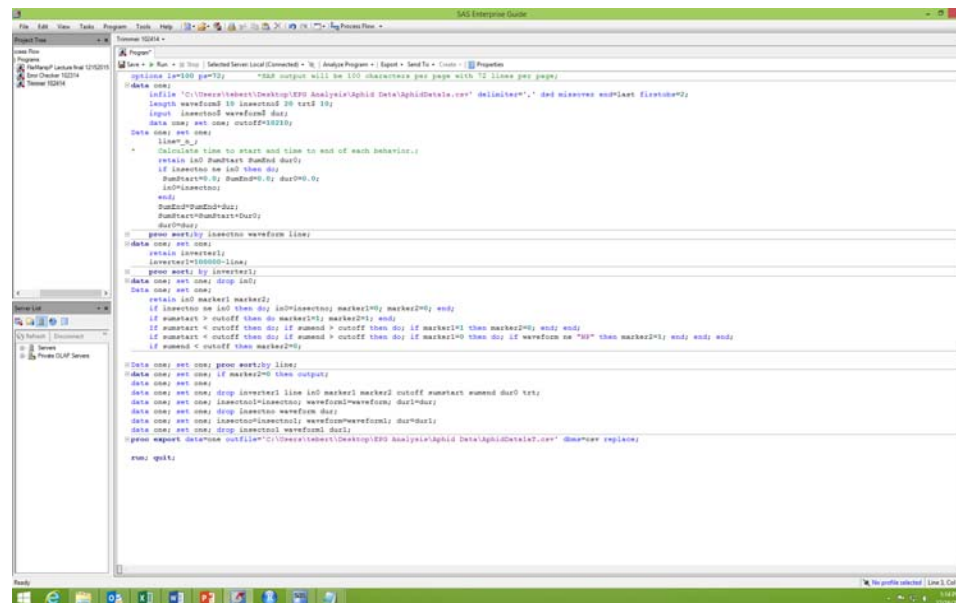
- Given that I have only three insects in treatment A, I will live with the loss of about 3 hours of recording.
- The best option would be to gather more data, but this is an example.
- I would save the corrected file under a different name: `AphidData1a.csv`

Details

```
SAS Enterprise Guide  
n Tools Help | [Icons] | Process Flow  
mmer 102414  
Program  
| Save ▾ ▶ Run ▾ ■ Stop | Selected Server: Local (Connected) ▾ | Analyze Program ▾ | Export ▾ Send To ▾ Create ▾ | Properties  
options ls=100 ps=72; *SAS output will be 100 characters per page with 72 lines per page;  
data one;  
  infile 'C:\Users\tebert\Documents\Elaine EPG Work\Insecticide Trials\FulFill Project 3\Raw Data\Raw Data  
  length waveform$ 10 insectno$ 20 trt$ 10;  
  input insectno$ waveform$ dur;  
  data one; set one; cutoff=84040;  
Data one; set one;  
  line=_n_;  
* Calculate time to start and time to end of each behavior.;  
  retain in0 SumStart SumEnd dur0;  
  
data one; set one; drop insectno line in0 marker1 marker2 cutoff SumStart SumEnd dur0 trt;  
data one; set one; insectno1=insectno; waveform1=waveform; dur1=dur;  
data one; set one; drop insectno waveform dur;  
data one; set one; insectno=insectno1; waveform=waveform1; dur=dur1;  
data one; set one; drop insectno1 waveform1 dur1;  
proc export data=one outfile='C:\Users\tebert\Documents\Elaine EPG Work\Insecticide Trials\FulFill Project 3\Raw Data\Raw Data TRT3T.csv' dbms=csv replace;  
run; quit;
```


Run Trimmer

- The program should look like this:



```

%*SA output will be 100 characters per page with 12 lines per page;
%*lines 1=100 per%*

infile "&infile" delimiter="," dds misvalues suplast firstobs=2;
input waveform1 10 insectaid 30 outd 30;
data one; set one; outoff=10210;
Data one; set one;
  line=" ";
  * Determine time to start and time to end of each behavior.;
  retain i0d sumstart sumend dur1;
  if insectaid ne i0d then do;
    sumstart=0; sumend=0; dur1=0;
  end;
  i0d=insectaid;
  sumend=sumend+dur1;
  dur1=dur1+sumend-sumstart;
  sumstart=insectaid waveform1 line;
%*Data one; set one;
retain insectaid;
insectaid=1000000-line;
%*proc sort; by insectaid;
Data one; set one; drop i0d;
retain i0d marker1 marker2;
if insectaid ne i0d then do; i0d=insectaid; marker1=0; marker2=0; end;
if sumstart > outoff then do marker1=1; marker2=1; end;
if sumstart < outoff then do; if sumend > outoff then do; if marker1=1 then marker2=0; end; end;
if sumend < outoff then do; if marker1=0 then do; if waveform1="SU" then marker2=1; end; end; end;
if sumend < outoff then marker2=0;
%*Data one; set one; proc sort; by line;
Data one; set one; if marker2=0 then output;
Data one; set one; drop insectaid line i0d marker1 marker2 outoff sumstart sumend dur1 text;
Data one; set one; insectaid=insectaid; waveform=waveform1; dur1=dur1;
Data one; set one; drop insectaid waveform dur1;
Data one; set one; insectaid=insectaid1; waveform=waveform1; dur1=dur1;
Data one; set one; drop insectaid1 waveform1 dur1;
proc export data=one outfile="&outfile" dds misvalues suplast firstobs=2;
run; quit;

```

- Run Trimmer