I treat every row in activity file as a linked trip to get the linkedTrip.RData.

Step2\_AugTable. R involves with "ChangeMode" trips and mainly delete ChangeMode trips in place file to get Linkedtrips. While there is only activity file and no place file in Portland\_94 data. In activity file, there is no value that indicates "ChangeMode" in field ACT1 (What is your activity). And there is a field MODCHG indicating "Did you change mode?" in activity file.  Each row in activity file is treated as a linked trip.

Some key points about generating linked trip follows.

1. Trip purpose classification

workLabels = c("Work", "Work-related")

othLabels = c("Meals", "Personal services", "Medical care", "Professional services", "Household or personal business", "Household maintenance", "Household obligations", "Pick-Up/Drop-Off passengers", "Visiting", "Culture", "Religion/Civil Services", "Civic", "Volunteer work", "Hobbies", "Exercise/Athletics", "Rest and relaxation", "Spectator athletic events", "Incidental trip", "Tag along trip")

shopLabels = c("Shopping (general)", "Shopping (major)")

recLabels = c("Casual entertaining", "Formal entertaining", "Amusements (at-home)", "Amusements (out-of-home)")

schLabels = c("School")

2. Two day survey vs one-day survey

1994 is two-days survey:

DAY1 in hh file and DAY2 in hh file indicate survey day.

3. Home Location

hhtaz <- linkedTrip %>%

filter(OLOC=="HOME"| OLOC=="RESIDENCE") %>%

arrange(SAMPN, OLOC) %>%

group\_by(SAMPN) %>%

summarize(HTAZ=first(TAZ))

3. Do not use RTZ

Because some RTZ in geocode is 0:



In taz1260, there is no RTA is 0, and 0 TAZ cannot get trip distance from trip distance matrix from emme.

Just use x/y coordinate from geocode to identify location, do not use RTZ from geocode.

5. Because ACT1. f is a factor, lag just get the value of ACT1.f instead of lable

act1 <- act1%>%

filter(DAYNO==1) %>%

arrange(SAMPN, PERNO, ACTNO) %>%

group\_by(SAMPN, PERNO) %>%

mutate(LastHOME=lag(HOME),

LastACT1.f=lag(ACT1.f),

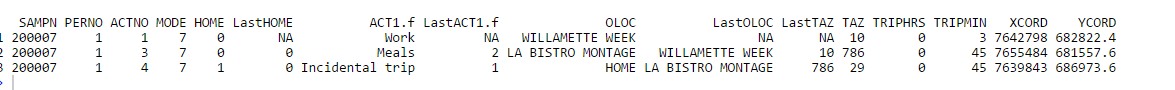
LastOLOC=lag(OLOC),

LastTAZ=lag(TAZ)

) %>%

select(SAMPN, PERNO, ACTNO, MODE, HOME, LastHOME, ACT1, ACT1.f, LastACT1.f, OLOC, LastOLOC, LastTAZ, TAZ,

TRIPHRS, TRIPMIN, XCORD, YCORD)



4. Cannot filter rows before lag

ACT1 <- ACT1 %>%

filter(!is.na(XCORD)

Above script before lag function disturb the order of trip. This makes a large mistake.