Reading Excel files

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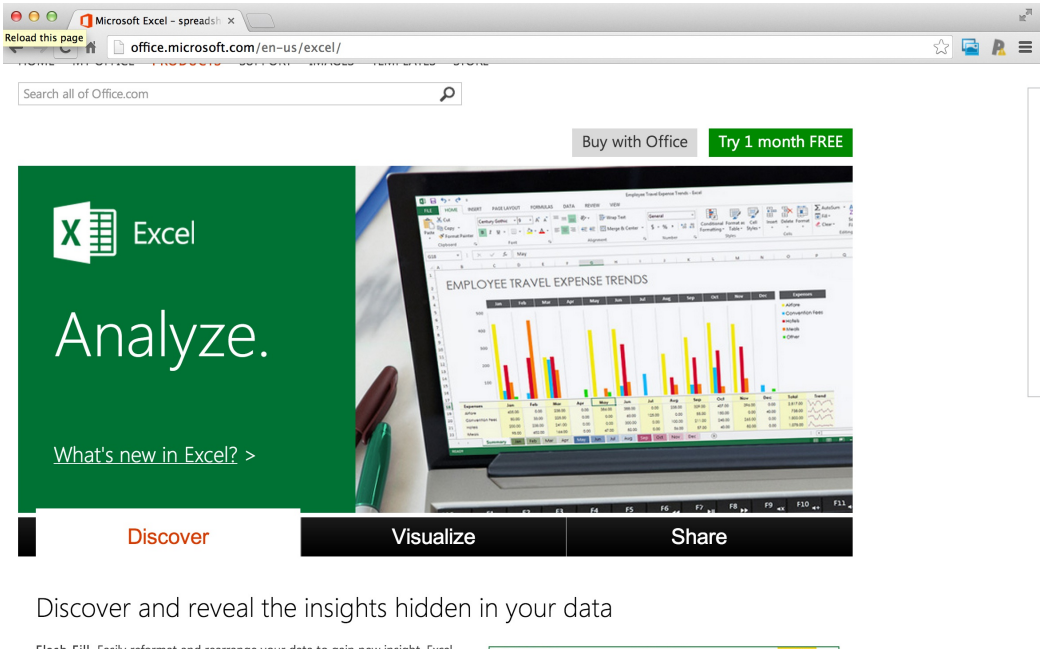
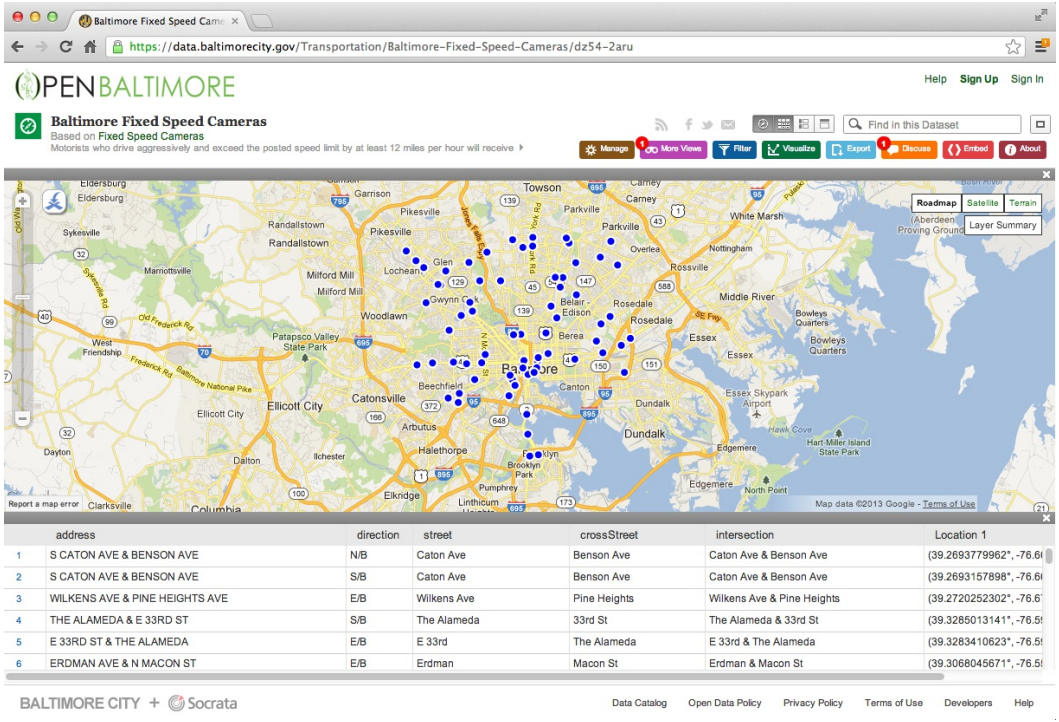
Excel files

Still probably the most widely used format for sharing data



http://office.microsoft.com/en-us/excel/

Example - Baltimore camera data



https://data.baltimorecity.gov/Transportation/Baltimore-Fixed-Speed-Cameras/dz54-2aru

Download the file to load

```
if(!file.exists("data")){dir.create("data")}
fileUrl <- "https://data.baltimorecity.gov/api/views/dz54-2aru/rows.xlsx?accessType=DOWNLOAD"
download.file(fileUrl,destfile="./data/cameras.xlsx",method="curl")
dateDownloaded <- date()
```

read.xlsx(), read.xlsx2() {xlsx package}

```
library(xlsx)
cameraData <- read.xlsx("./data/cameras.xlsx",sheetIndex=1,header=TRUE)
head(cameraData)
```

```
                        address direction      street  crossStreet                intersection
1       S CATON AVE & BENSON AVE       N/B   Caton Ave   Benson Ave     Caton Ave & Benson Ave
2       S CATON AVE & BENSON AVE       S/B   Caton Ave   Benson Ave     Caton Ave & Benson Ave
3 WILKENS AVE & PINE HEIGHTS AVE       E/B Wilkens Ave Pine Heights Wilkens Ave & Pine Heights
4        THE ALAMEDA & E 33RD ST       S/B The Alameda       33rd St     The Alameda  & 33rd St
5        E 33RD ST & THE ALAMEDA       E/B      E 33rd  The Alameda      E 33rd  & The Alameda
6
1 (39.2693779962, -76.6688185297)
2 (39.2693157898, -76.6689698176)
3  (39.2720252302, -76.676960806)
4 (39.3285013141, -76.5953545714)
5 (39.3283410623, -76.5953594625)
6 (39.3068045671, -76.5593167803)
```

Reading specific rows and columns

```
colIndex <- 2:3
rowIndex <- 1:4
cameraDataSubset <- read.xlsx("./data/cameras.xlsx",sheetIndex=1,
                              colIndex=colIndex,rowIndex=rowIndex)
cameraDataSubset
```

```
  direction      street
1       N/B   Caton Ave
2       S/B   Caton Ave
3       E/B Wilkens Ave
```

Further notes

- The *write.xlsx* function will write out an Excel file with similar arguments.
- *read.xlsx2* is much faster than *read.xlsx* but for reading subsets of rows may be slightly unstable.
- The XLConnect package has more options for writing and manipulating Excel files
- The XLConnect vignette is a good place to start for that package
- In general it is advised to store your data in either a database or in comma separated files (.csv) or tab separated files (.tab/.txt) as they are easier to distribute.