

BinX

Dynamic exploration of time series

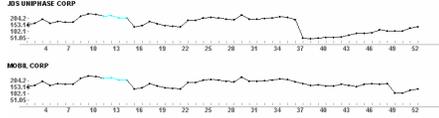
Final project report
Information Visualization - CS533c
Lior Berry

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Motivation

- More time dependent information is gathered
- Long time series
- Unsuitable for static visualization



ScreenShot adapted from the TimeSearcher tool (UMD)



The Data & tasks

- Daily currency exchange rates over 15 years (5000 data points)
- Comparing different time periods
- Comparing two currencies

DATE	GBP	CAD	JPY
1/1/1999	0.6087	1.5315	113.3
1/2/1999	0.6112	1.5326	113.49
1/3/1999	0.6033	1.532	113.35
1/4/1999	0.6028	1.5272	113.52
1/5/1999	0.6042	1.523	111.33
1/6/1999	0.6039	1.5088	112.39
1/7/1999	0.6056	1.512	111.18
1/8/1999	0.6091	1.5135	111.48
1/9/1999	0.6096	1.512	110.89
1/10/1999	0.6099	1.5125	110.4
1/11/1999	0.6086	1.5073	109.5
1/12/1999	0.6138	1.5086	112.15
1/13/1999	0.6085	1.529	112.4
...

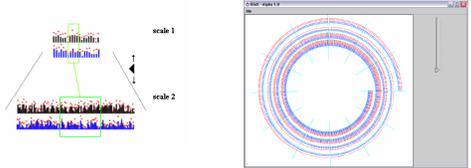


Visualization principles

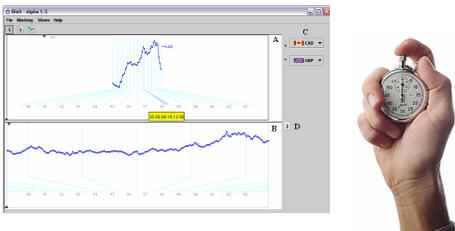
- **Aggregating** over time intervals
- Smooth navigation
- Maintaining context + clear feedback
- Multiple views (Linking)



Visualization metaphor




Demo




Lessons learned



- Detail + overview is invaluable
- Animation reduces cognitive load
- Mix and match allows flexible exploration
- Extending the marking mechanism

Thank you



- Questions ?