RFM/B

DMA of Northern California

May 20, 2009

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THE generations network

What We'll Cover

- Basics & History Lesson
- Recency
- Frequency
- Monetary
- Breadth
- Combined RFM Segments
- Wrap

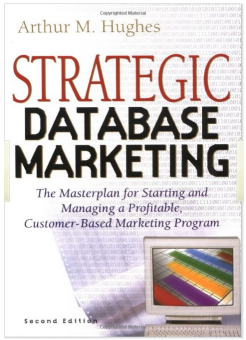
So What's RFM/B?

- It's all about your customer!
- Recency – How long since they did it?
- Frequency – How often have they done it?
- Monetary – What have they paid you to do it?

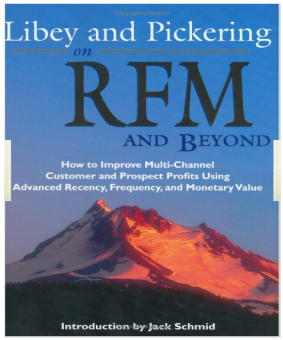
- Breadth – How many ways have they done it?
- "it" depends on what you do & are measuring...
  - Selling things => event is purchasing (classical RFM)
  - Communicating => event is reading, clicking
  - Delivering => event is using
- Variations: R F x

History – Two Approaches

- RFM for Prediction
  - Bucket each dimension
    - Pentile: 1, 2, 3, 4, 5
  - Combine into RFM score
    - 351, 123, etc
  - Rank by outcome in test
    - 351, 314, 142, 425, …
  - Roll out in ranking order



- RFM for Understanding
  - Plot each dimension
    - W/ meaningful breaks
  - Look at each individually
  - Look at interactions
  - Create strategies



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Jim's Approach

- Predict with modern tools (not “classical” RFM)
  - BUT: you will probably find recency & frequency metrics are highly predictive!
- Visualize R, F, M, x dimensions in a way that makes sense for *your* customer base
- Combine dimensions - visualize!
- Derive meaningful & actionable segments

Aside – The BIG GOTCHA

- Maintaining Customer Identity over...
  - Time
    - Moves, email addresses, logins, ...
  - Channel
    - On-line, catalog, brick & mortar, telephone, …
- I'll ignore this issue for rest of talk
- You can not!
  - Solve technical issues
  - Make it easy for customers to identify themselves
  - Motivate customers to maintain single identity
  - Consider house-holding (B2C) & firm-holding (B2B)

Case Study Used Throughout

- Actual web & phone sales records (sanitized)
  - 541k order detail lines
  - 135k Customers
  - Over 2 ½ years
  - Of ~900 different products
  - In 5 product categories
- Conventional wisdom
  - Strong seasonality
  - Have a loyal customer base
  - But, have retention problem

Case Study – What we know

Imagine a customer order form:

Date: 10/10/07 Order #: 12345

Customer: 3894832
Sue Smith
1 Short Street
Smallville, ND, 39248

Qty	SKU	Description	Unit Price	Ext Price
1	123	Green Gizzmo	1.50	1.50
3	345	White Widget	2.00	6.00

Total	7.50
Tax	0.60
Shipping	2.00
Grand Total	**10.10**

We get the highlighted data.

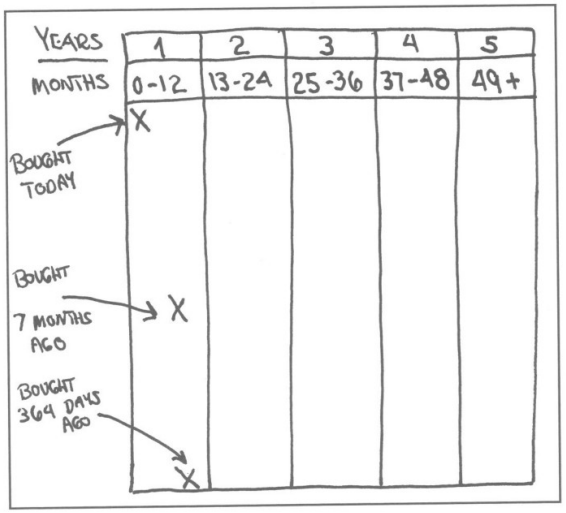
Plus: order channel and product (SKU) category

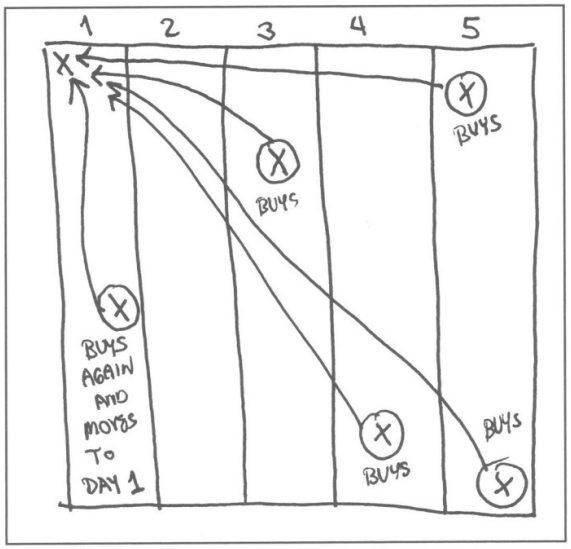
Recency

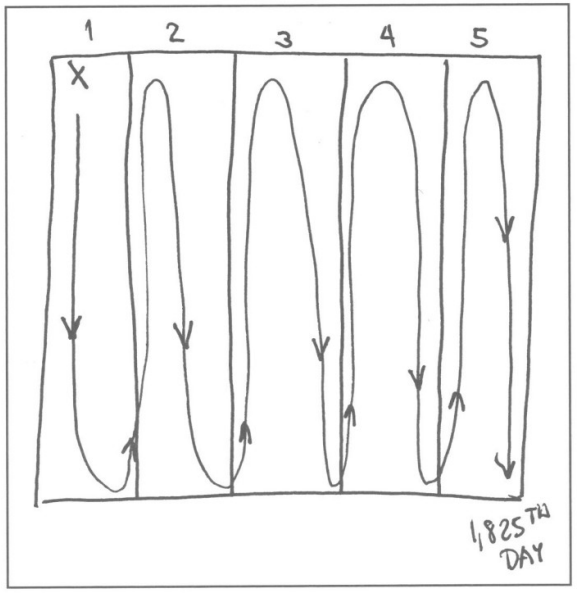
Recency

- Time since last event
  - In our example, the purchase
  - Could be *any* significant customer interaction event
- What is “time constant” of your customers?
  - Milk, bread, music, ...
  - Shoes, books, tools, …
  - Cars, computers, art, …
  - Houses, appliances, …
- Seasonality issue?
  - Global or personal
- Subscription model?

Visualizing Recency – Libey's way



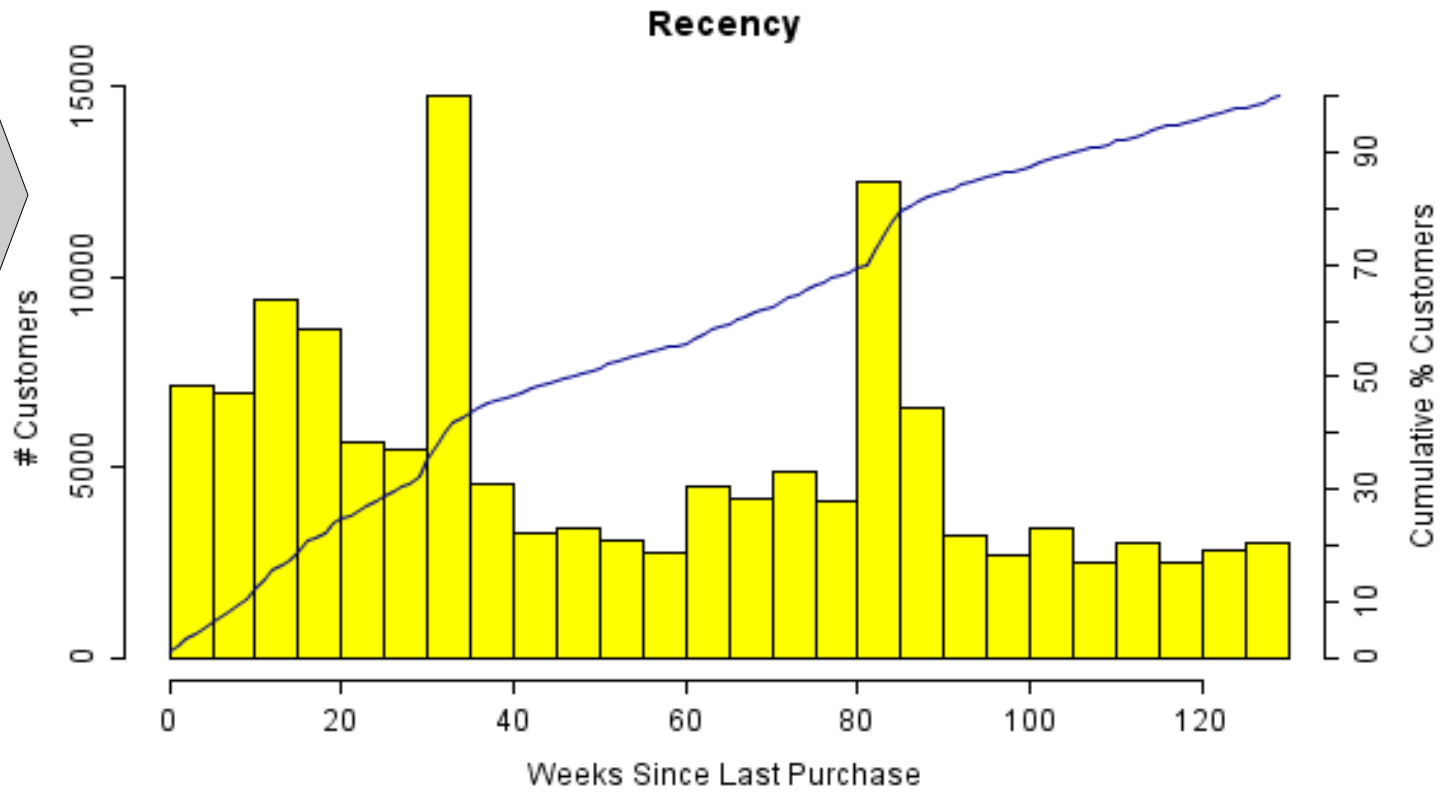




From Libey & Pickering, Chapter 1

Visualizing Recency – Jim's way

1



2

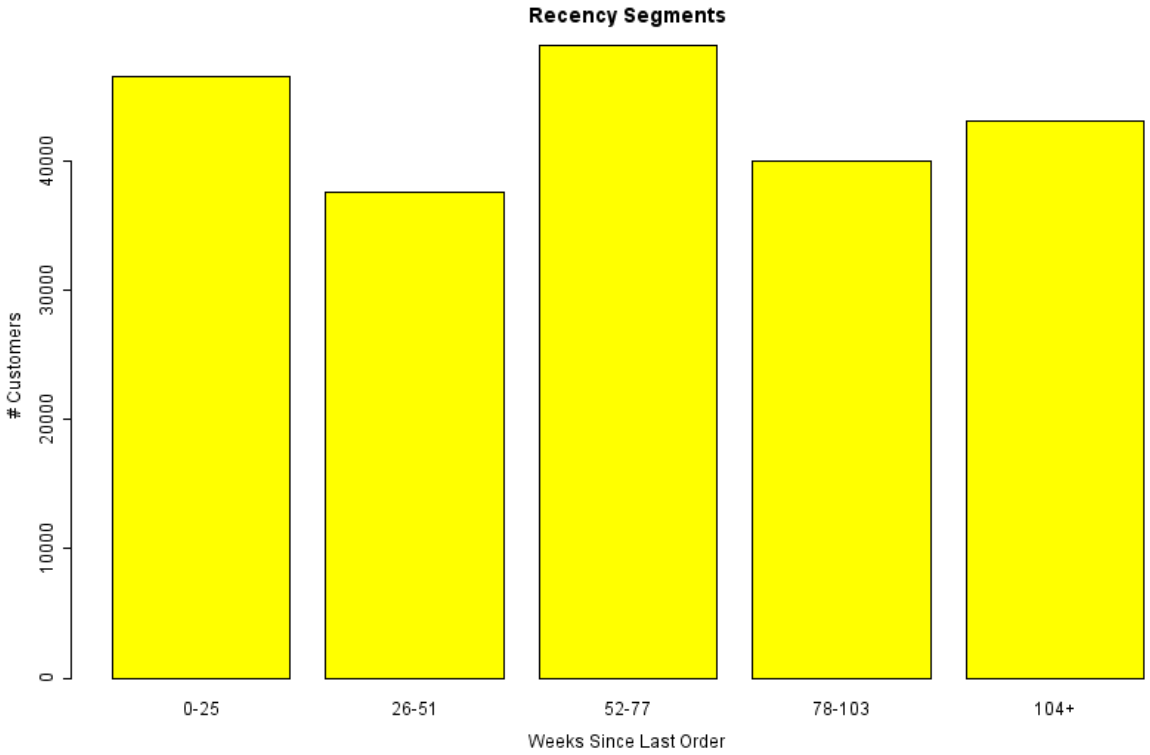
Breaks (weeks <=): 25, 51, 77, 103, <else>

levels = c("0-5", "6-11", "12-17", "18-23", "24-29"))

Note levels labeled in months, not weeks

Final Recency Segments

3



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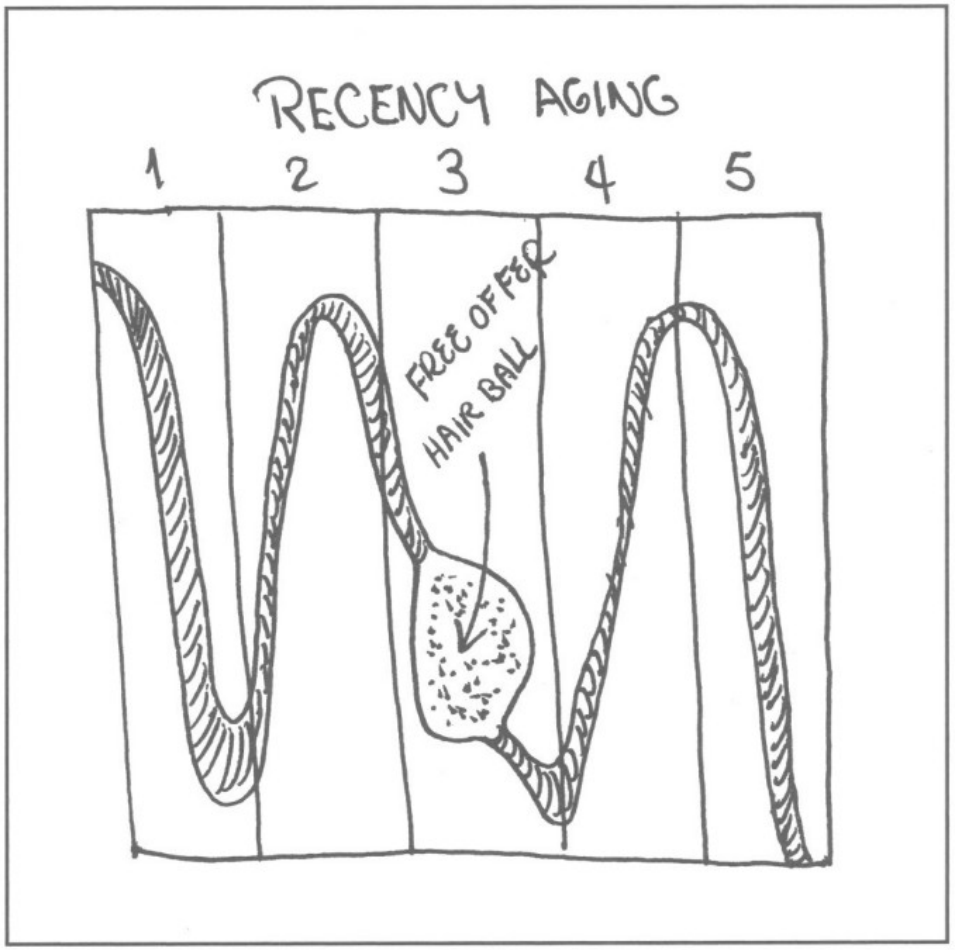
Aside – My Favorite Libey Figure



Let's face it, we've all had our “hair balls!”

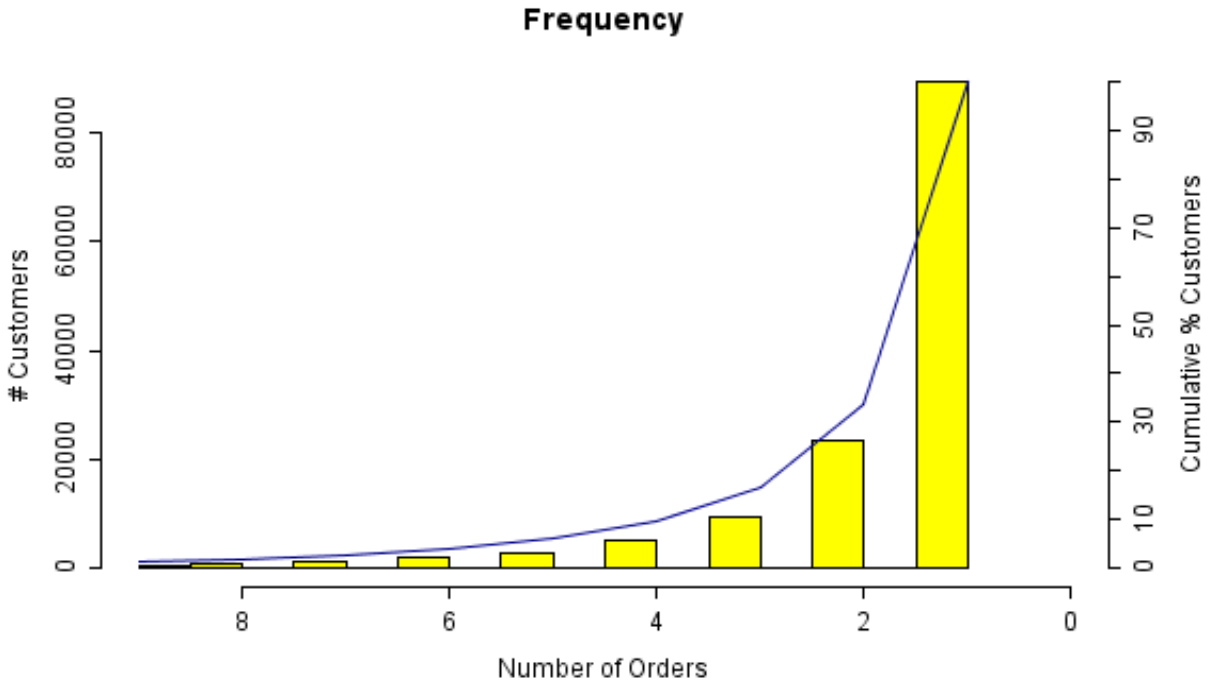
Frequency

Frequency

- Frequency = How may events in a fixed time period.
- What's the event?
  - Order item?
  - Order number?
  - Order day?
- How far back in time do we look?
  - Let recency plot give some guidance
  - Any discontinuities in way of doing business?
    - Or business climate?

Visualizing Frequency

1



2

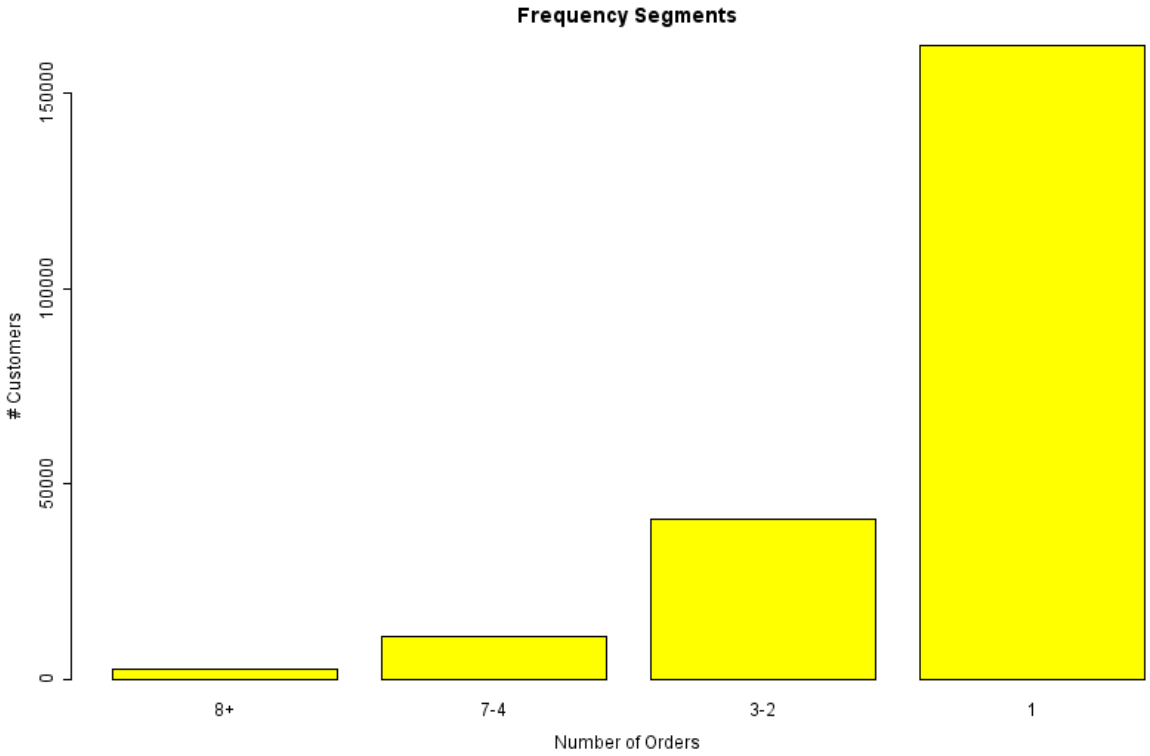
Breaks (count <=): 1, 3, 7, <else>

levels = c("8+", "7-4", "3-2", "1"))

Note ordering for best is left.

Final Frequency Segments

3



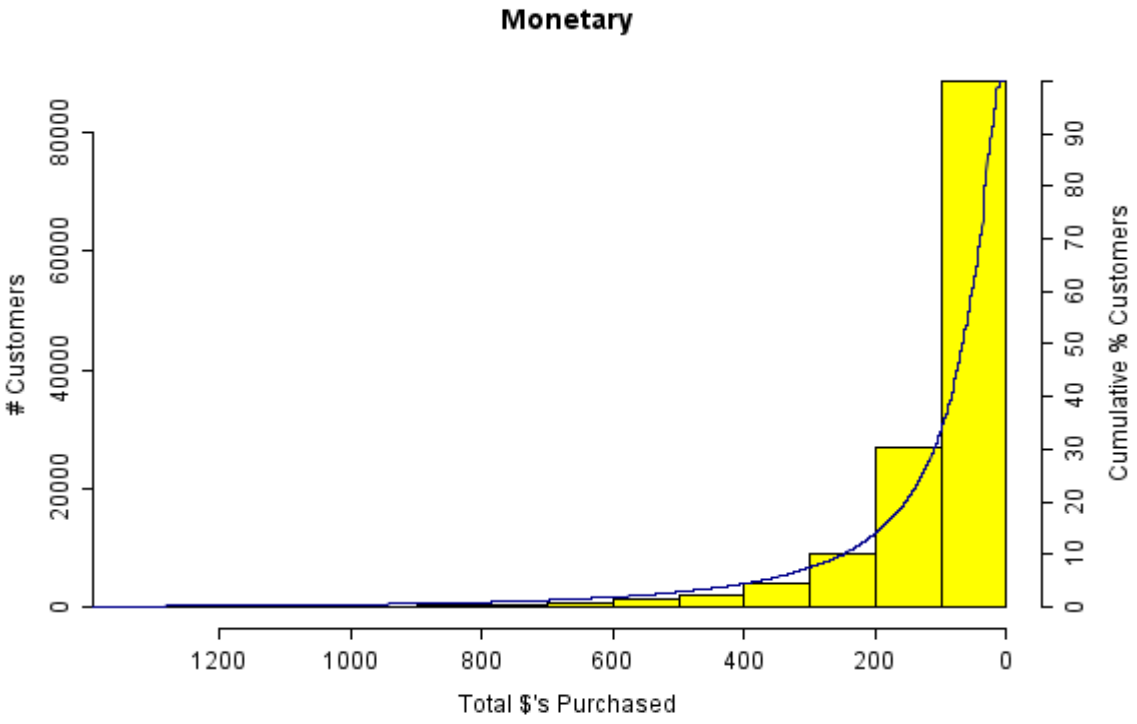
Monetary

Monetary

- Monetary = $'s spent in fixed time period
- Use same time period as for Frequency!

Visualizing Monetary

1



2

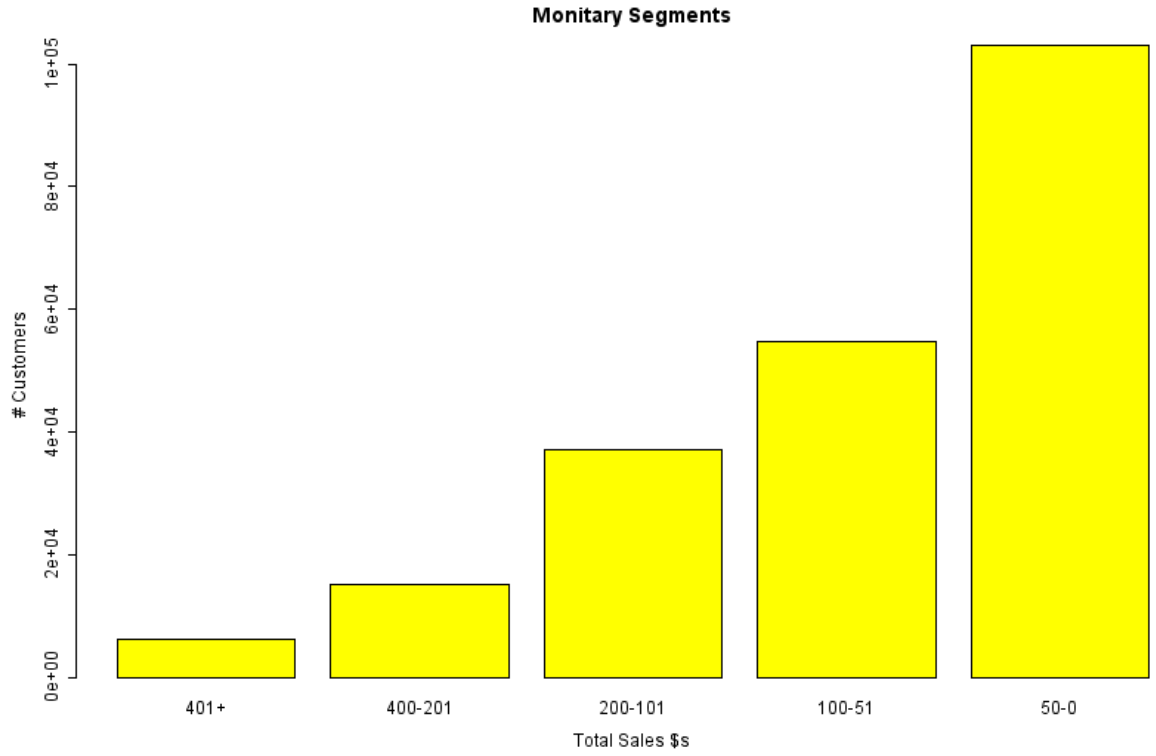
Breaks (value <=): 50, 100, 200, 400, <else>

levels = c("401+", "400-201", "200-101", "100-51", "50-0"))

Again ordering is best is left.

Final Monetary Segments

3

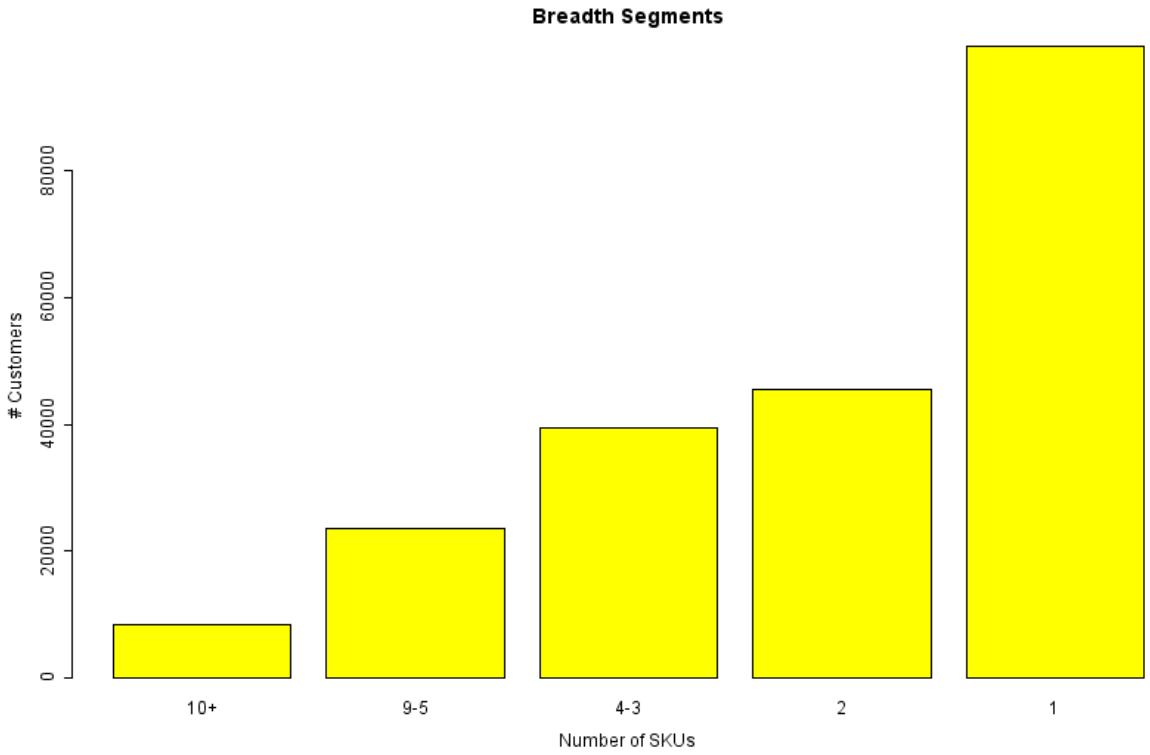


Breadth

Breadth

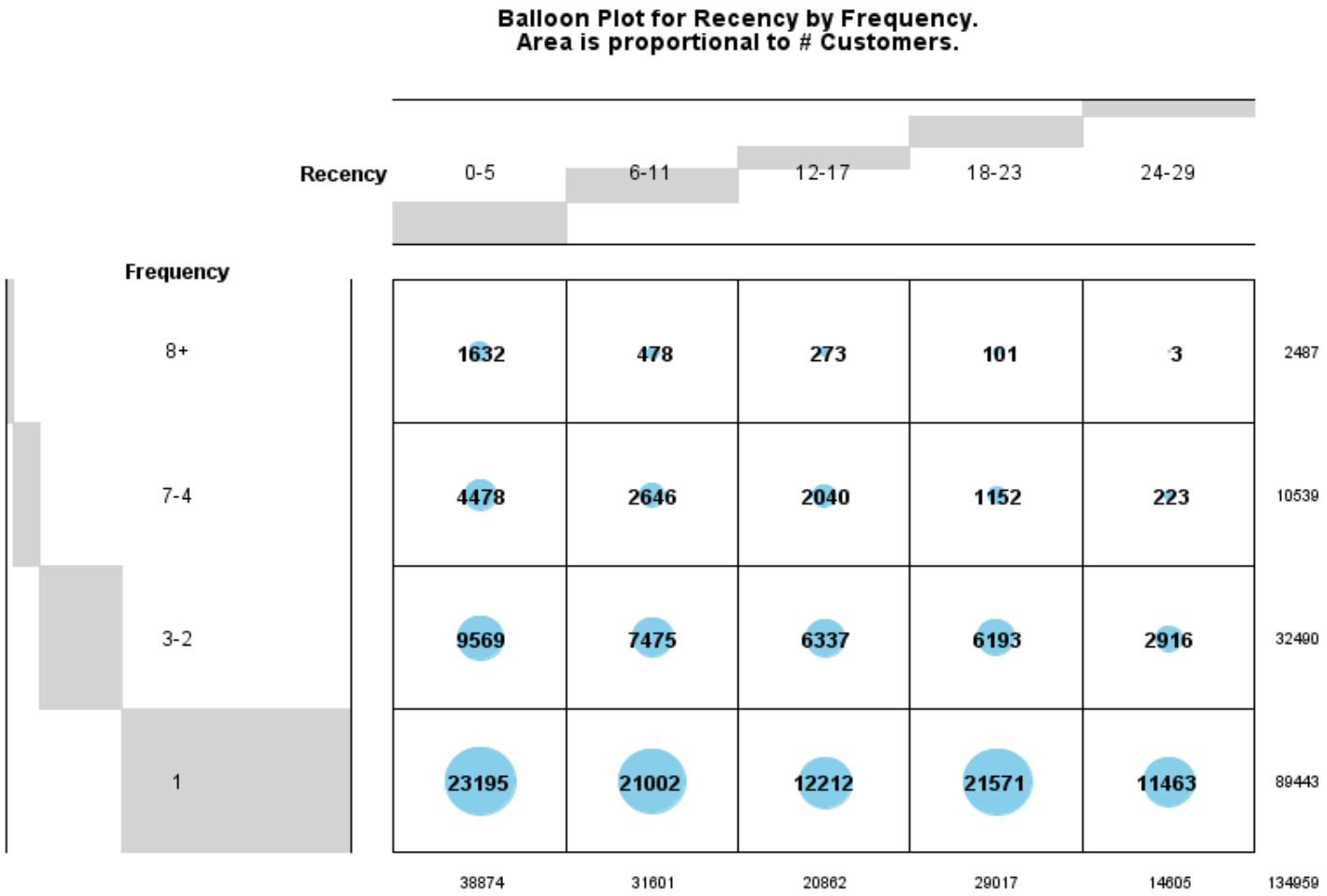
- Breadth = # different kinds of things
- What's “different”?
  - SKU
  - Product group
    - Or however marketing thinks about product line!
- Again, keep same time window as for Frequency & Monetary

Final Breadth Segments



Combining the Segments

Start with the basic two: R & F



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How Does Monetary Fit into Picture?

Next Step – RFM Segments

- What cells can be combined?
  - Must make sense for marketing actions. Be easy to identify & just a few!
- For Example...
  - Lifestage “dimension”
    - New, Active, Lapsed, Lost
  - Value “dimension”
    - Gold, Silver, Bronze
  - Combined as
    - High Value, Repeat, New, One-time, Lapsed, & Lost

What Segment for Each Cell?

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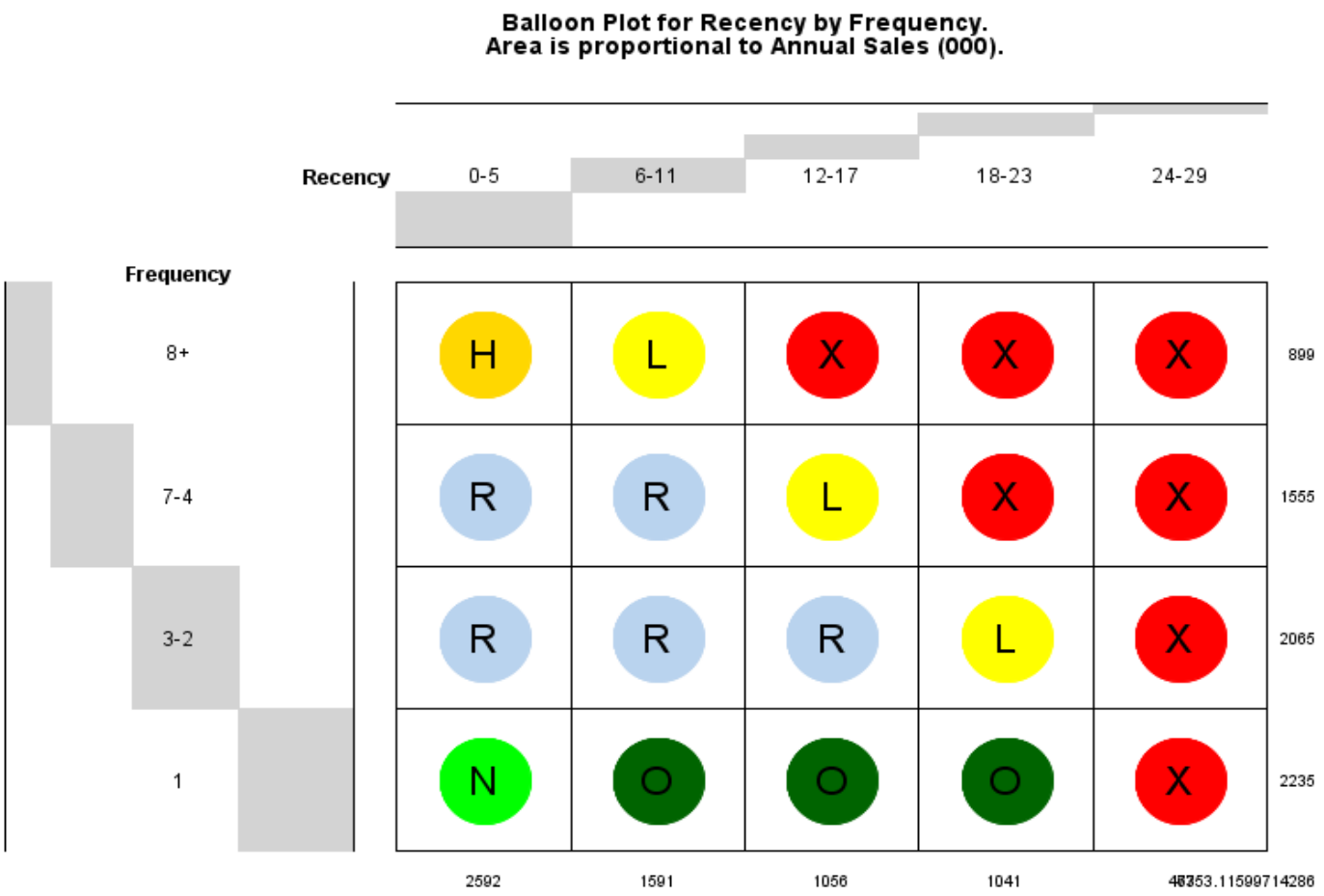
Segments on Balloon Plot



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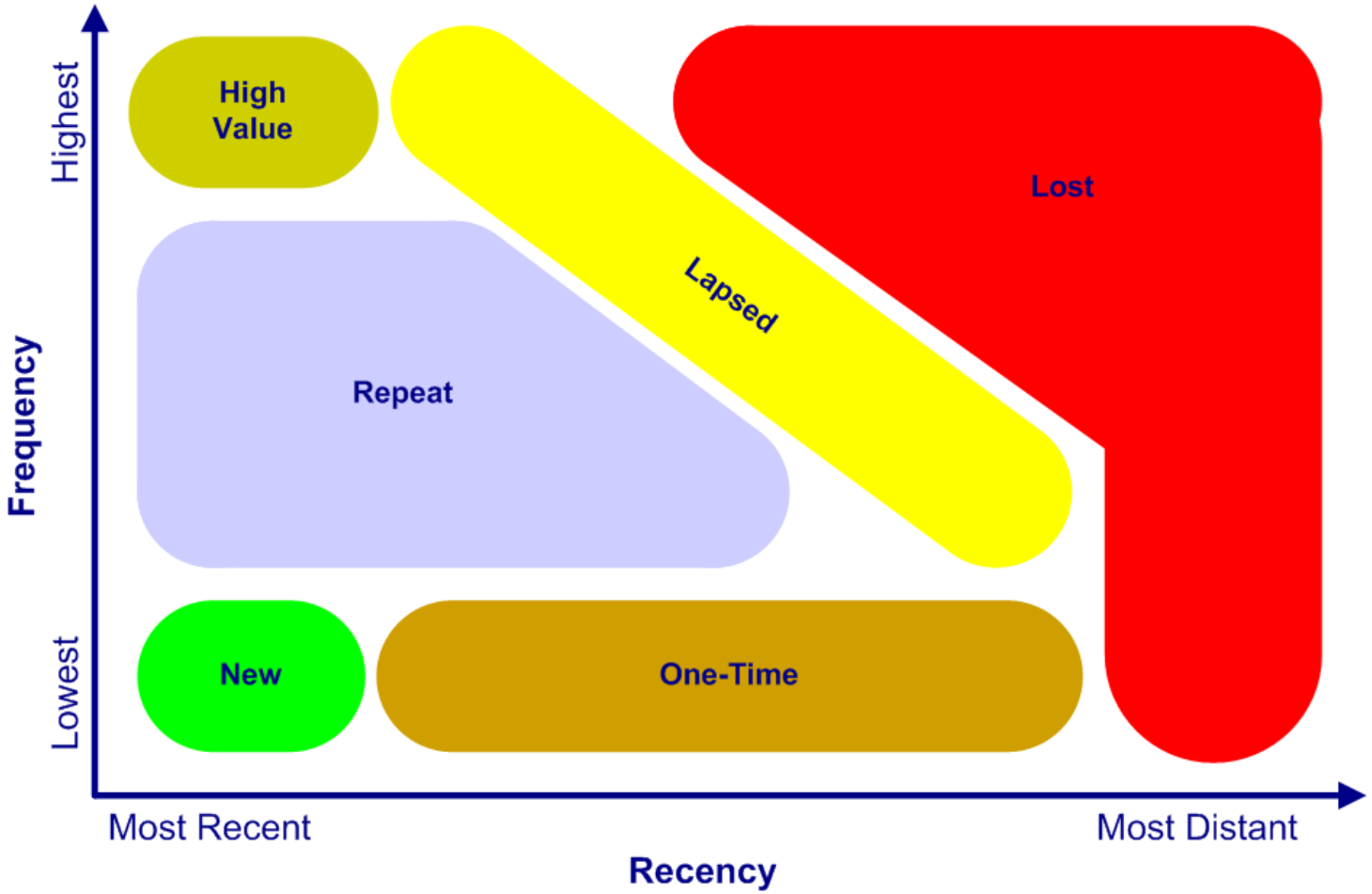
Conceptual RFM Segments



Aside – What's With Diagonal?

- High frequency customers, must have low recency to maintain their pattern of interaction
- For exact science see Fader & Hardie

What We've Done

- Starting with exploratory histograms of each dimension
- Segmented independently in meaningful ranges
- Combined into RFM segments which
  - Are easy to identify
  - Actionable
  - Testable
- R code to do all this at Jim's Archive

Resources

- Web Links
  - Don Libey:
    www.libey.com
  - Arthur M. Hughes:
    www.dbmarketing.com
  - Pete Fader & Bruce Hardie:
    http://www.brucehardie.com/
  - Jim's code & tutorials:
    www.porzak.com/JimArchive/

Questions? Comments?

- Now would be the time!