

Tennis Exercise Followup

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CPSC 547, Information Visualization

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<http://www.cs.ubc.ca/~tmm/courses/547-17>

TennisViewer

[Liqun Jin and David C. Banks, "Visualizing a Tennis Match," Proceedings of 1996 IEEE Symposium on Information Visualization (San Francisco, CA), pp. 108-114.]

[Liqun Jin and David C. Banks, "TennisViewer: A Browser for Competition Trees," IEEE Computer Graphics and Applications, Vol. 17, No. 4 (July/August 1997), IEEE Computer Society, pp. 63-65.]

- **synthesized data: entire single tennis match down to stroke level**
 - simulating strokes subject to prescribed probabilities

TennisViewer

- hierarchy

- match
- set
- game
- point
- service
- strokes

- top-nesting layered map

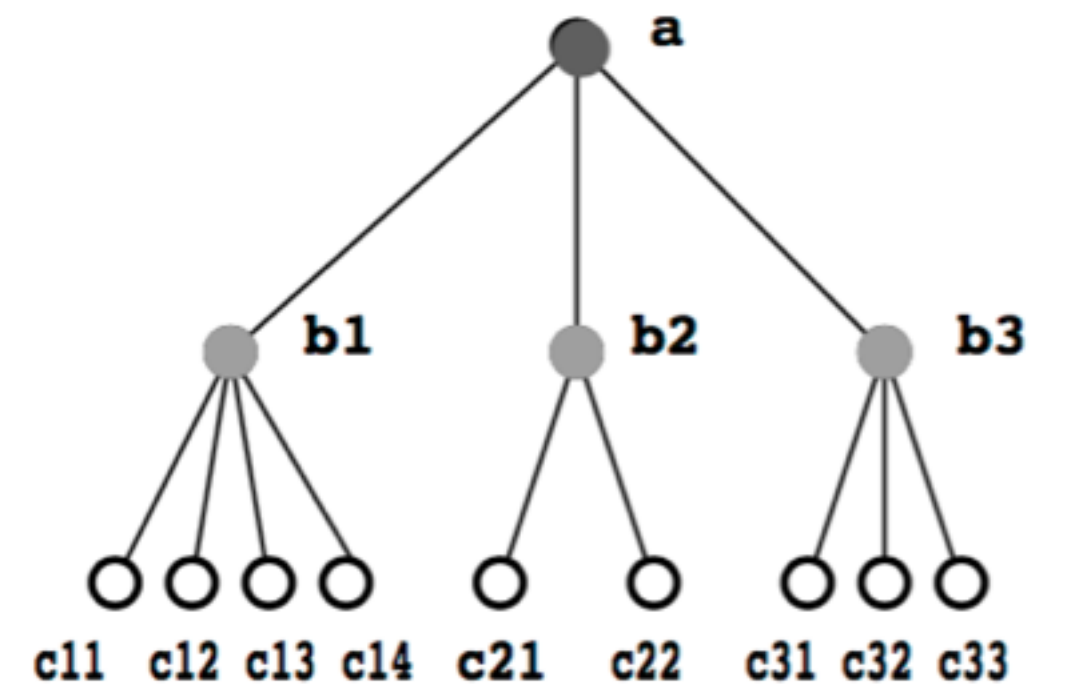
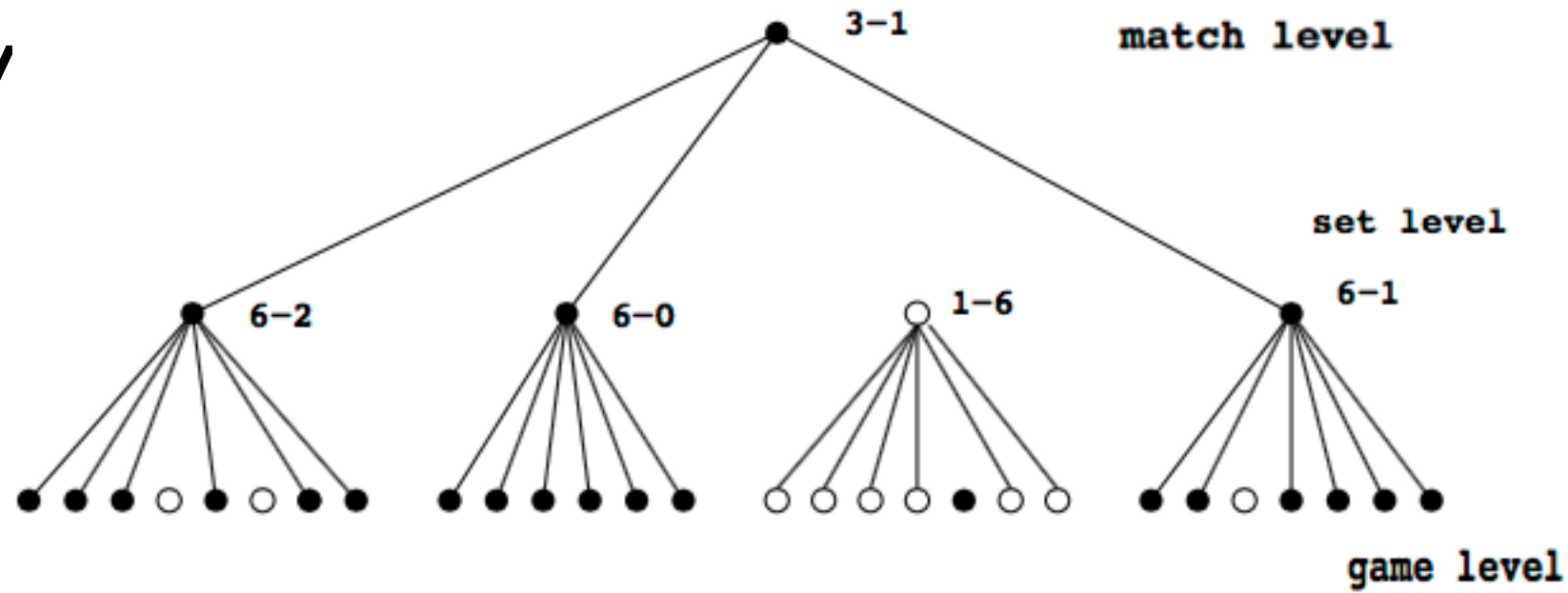


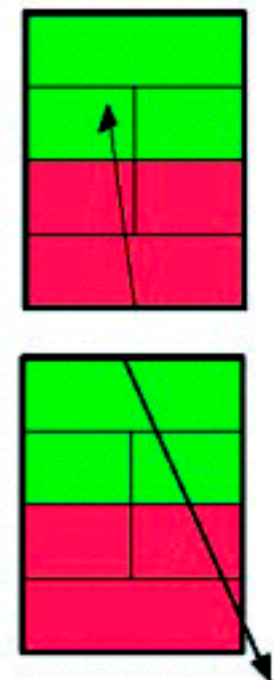
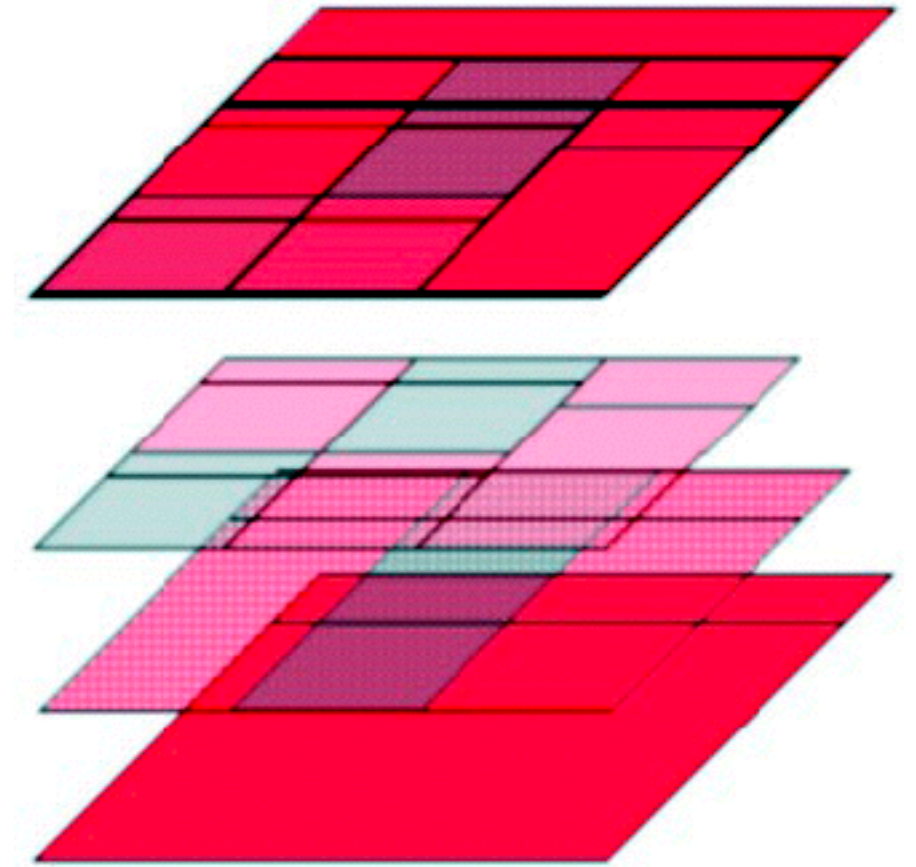
Figure 5: A tree

a		
b1	b2	b3
c11	c21	c31
c12		c32
c13	c22	
c14		c33

Figure 6: The top-nesting layered map of the tree in figure 5

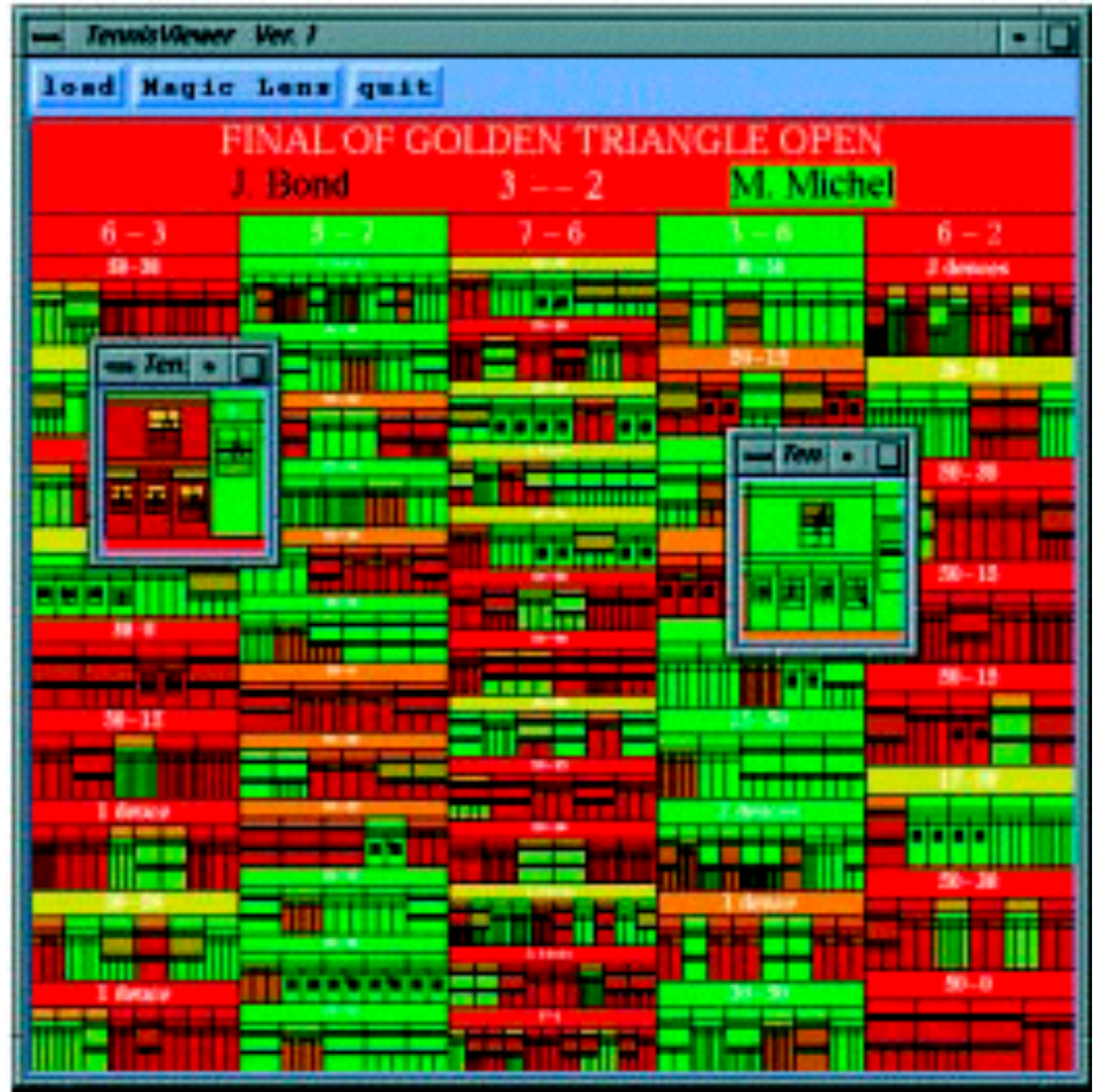
Tennis Viewer

- treemap idiom
 - subdivision: match, sets, games
 - coloured by player (red/green)
- 2D translucent layers
 - top made from combination of translucent planes below
 - local information (who won point, above) + global context (who won match, below).
- ball traces of strokes
 - icon: spatial layout of tennis court
 - arrow showing ball trace



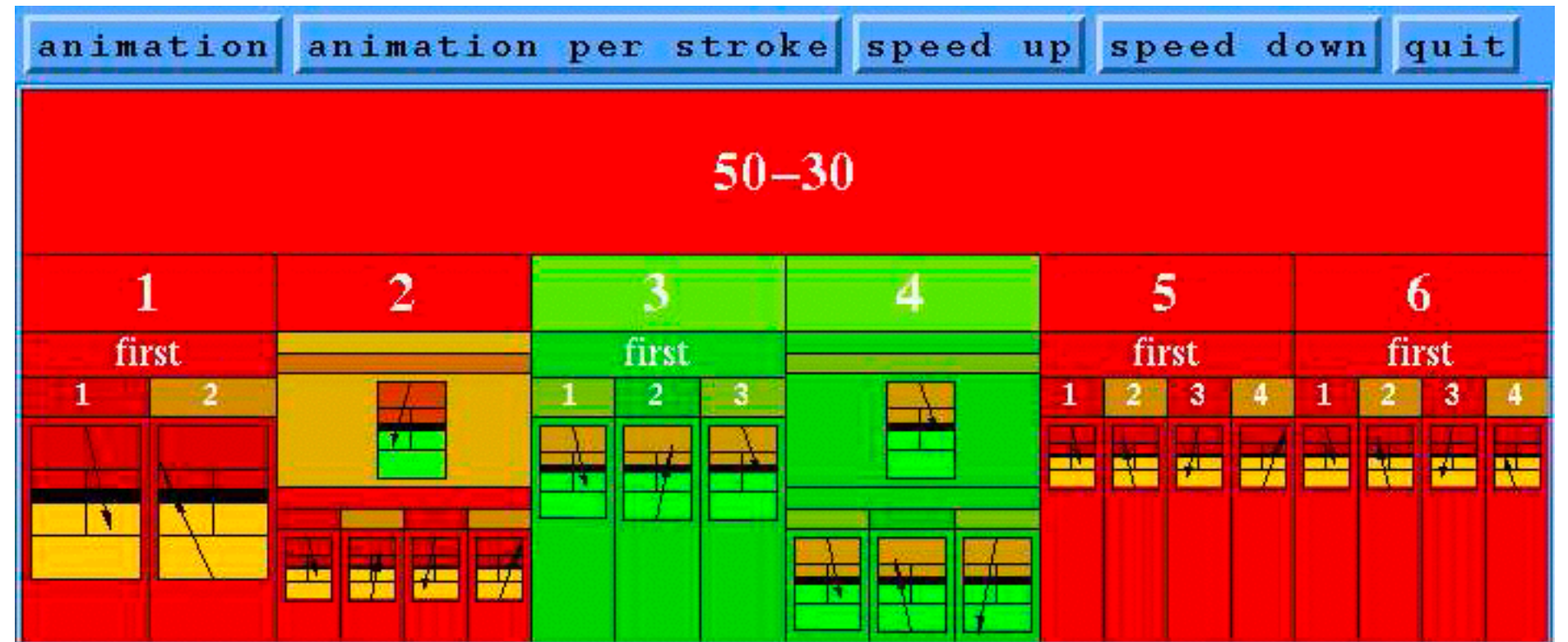
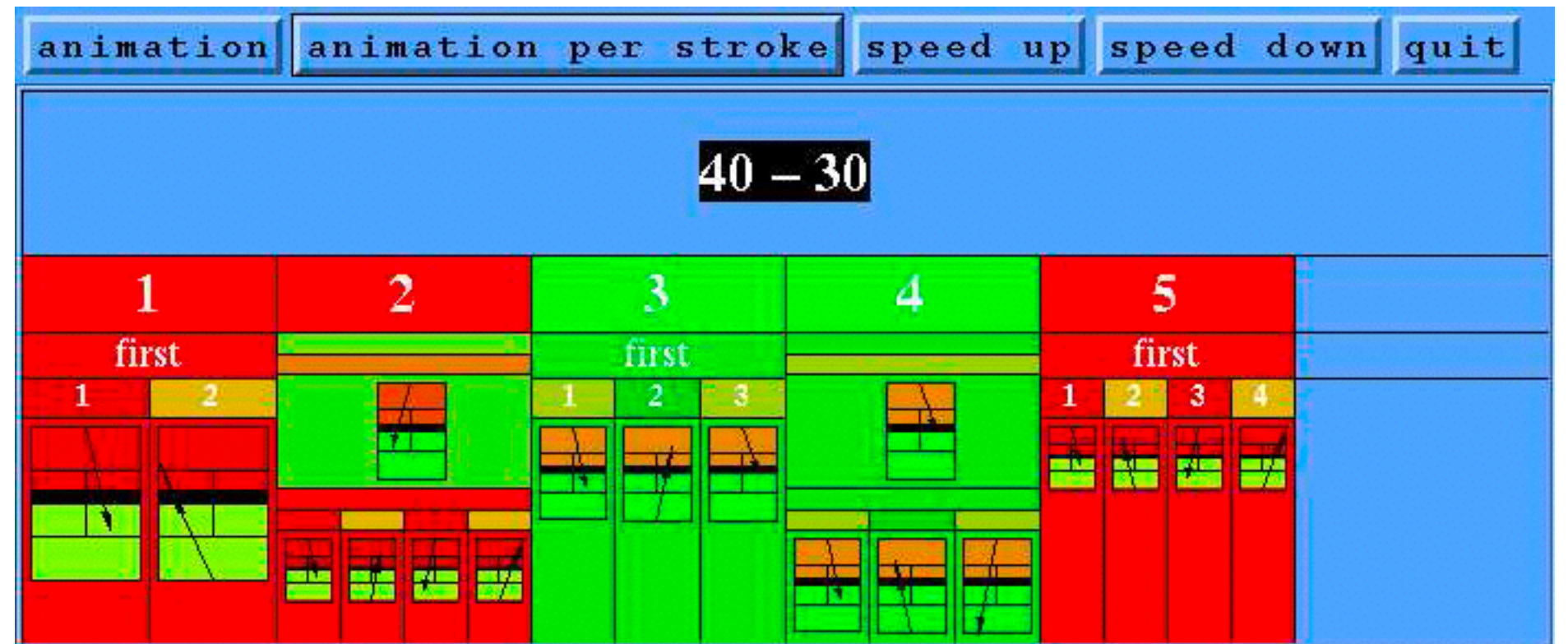
Tennis Viewer

- Magic Lens to zoom
 - redisplay contents underneath



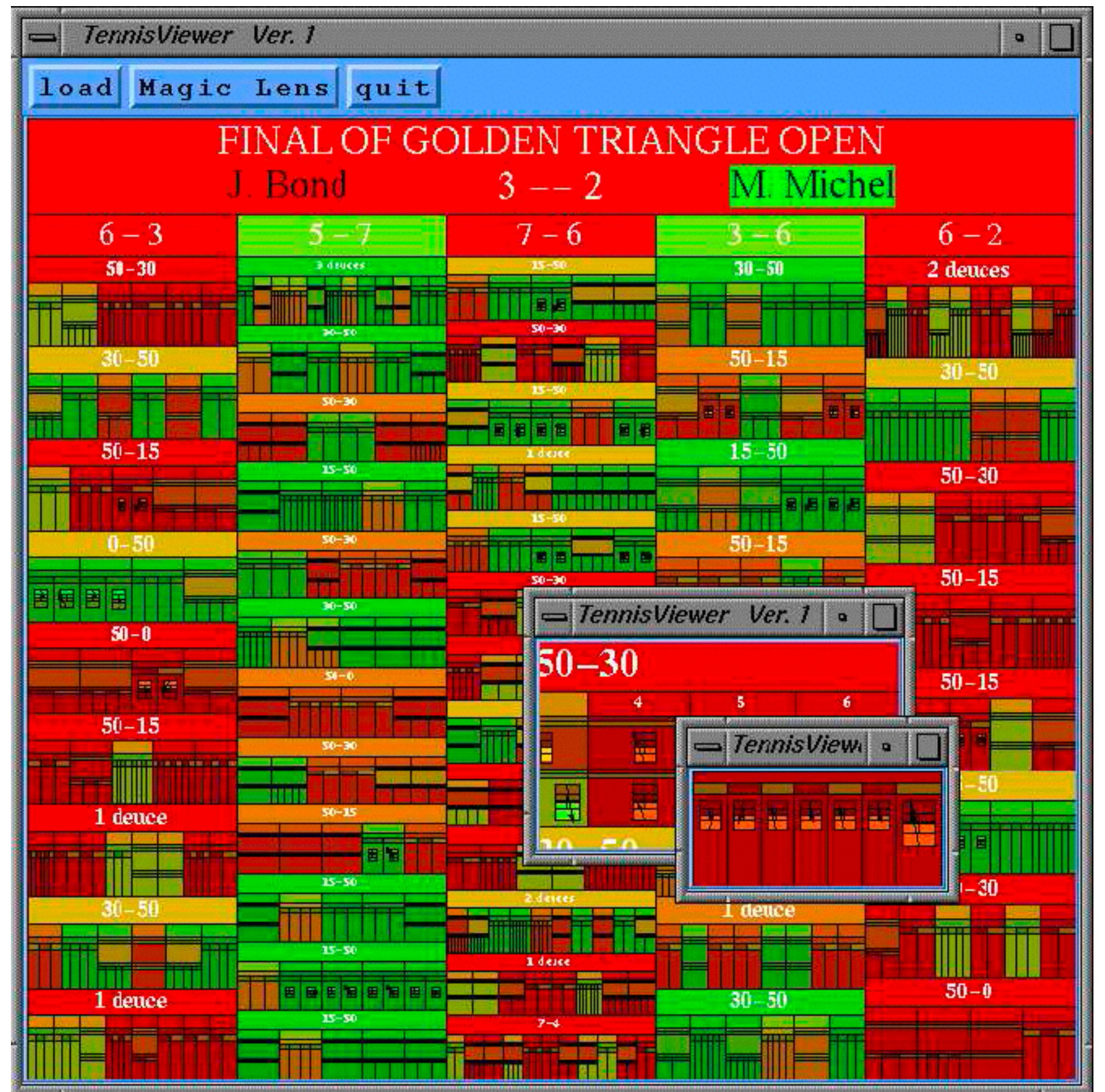
TennisViewer

- animation
 - before vs after final point



TennisViewer

- cardinality
 - 1 match
 - 5 sets
 - 51 games
 - 332 points
 - 446 services
 - 2800 strokes



Critique

- strengths?
- weaknesses?
- comparison to your own sketches?