Virtual Yachting On The Web

BRINGING THE
Whitbread
Home

Birth of a
Spectator
Sport

Presented by
Quokka Sports

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Virtual Yachting On The Web

9 Legs - 9 Ports
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Each boat equipped with GPS transmitters as well as Satellite uplink for weather and boat conditions, email, video, & images

Images, video and data transmitted to the Whitbread race office and replicated from the Race Management System to Quokka
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Why?

• Create an immersive experience
• Involve the audience
• Create a ‘sticky’ site
• Players sail head to head with the actual fleet

How?

• We’re collecting boat telemetry, but can we simulate it?
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Features

• Quality Simulation of the effects of sailing decisions on performance
  • hull design
  • sail selection
  • risk factors - events (demasted, man overboard, etc.)
  • course
  • select competitors

• weather
• boundaries

• Visualize the virtual fleet along side the actual fleet
  • nautical charts that pan and zoom illustrating the fleet
  • weather overlays with forecasted weather at 12 hour intervals
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Key Software Components

• Game Engine
  • C library
  • Weather data feed from uk met
• Database Harness For Game Engine
  • C++/Informix
• Web Harness For Game Engine
  • C++
• Graphical Client - Race Viewer - Active Sailing
  • Java Applets
• Nautical Chart Server
  • C++/Euronav Vector Graphic Charting Software
User input of waypoints and sailing decisions
Game engine available to run performance prediction against forecasted weather
Run at 6 hour intervals to correspond with position reports from the actual fleet and actual weather conditions.
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Race Viewer/Nav Station
log book, sail status, leader board, etc.
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How does a user pilot a boat on the web?
UI design challenge
Navigation Demo
CMG VS Dead Reckoning
Map Objects Structure

<<Interface>>
MapObject

0.. *
draw(Graphics g, MapCoordinateComputer mcc)

MapCanvas

MapCoordinateComputer

<<Interface>>
InfoPoint

WindCollection

WindPoint

1.. *

CourseRenderer

YachtReport

1.. *

ActiveCourse

YachtCourse
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Mapping Components re-used in:
• Race Management System
• Java Applets
• Flat Content Generation
• Animation Demo
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Development Experience

• 2.5 Quokka Engineers
  • Game Engine Daemons
  • Batch Game
  • Chart Server
  • Race Viewer/Nav Station (Visualizations)
  • Weather extraction from grib format
• 2 Off Site Game Engine Engineers
• 1.5 Graphic Designers
• Chart Engine Support/Euronav
• 6 Month Schedule
• The Right Team
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Serving The Virtual Race/Aftermath

•~10000 Registered Virtual Yachters
•A few good bugs - boundary points & weather
•Charting bottlenecks
•Quality achieved into the first leg
•All 9 legs served
•Emails from around the world
•Servlet technology would have helped
•Charting Alternatives