



# **Performance of Valence's Lithium Ion Polymer Battery**

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# Product Focus



■ Premium Portable Products

■ High Energy Density

■ Prismatic Packaging

■ Design Flexibility

■ Cost Reduction



# Products Targeted



- Cellular Telephones
- Laptop/Notebook Computers
- Personal Digital Assistants
- Camcorders



# Battery Chemistry



■ Rocking Chair Chemistry

■ High Energy Density

■ High Unit Cell Voltage

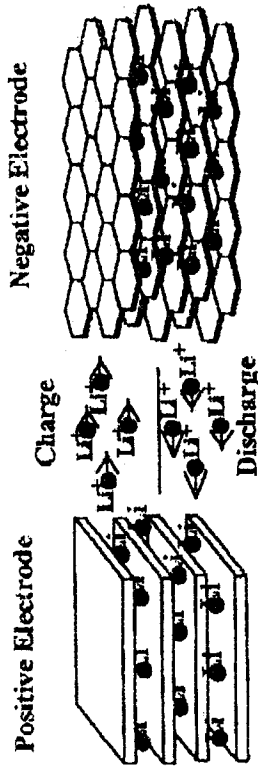
■ Solid Polymer Electrolyte

■ Low Cost Materials



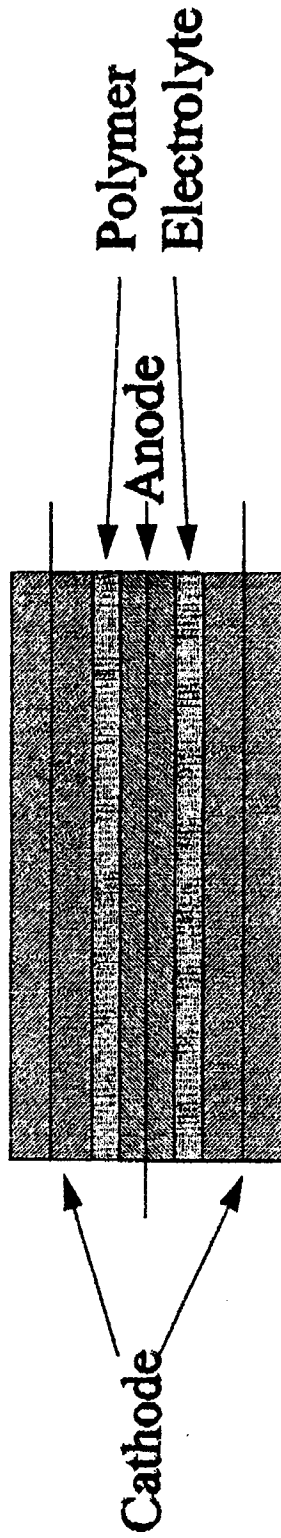
# Cell Operation

## Rocking Chair Concept



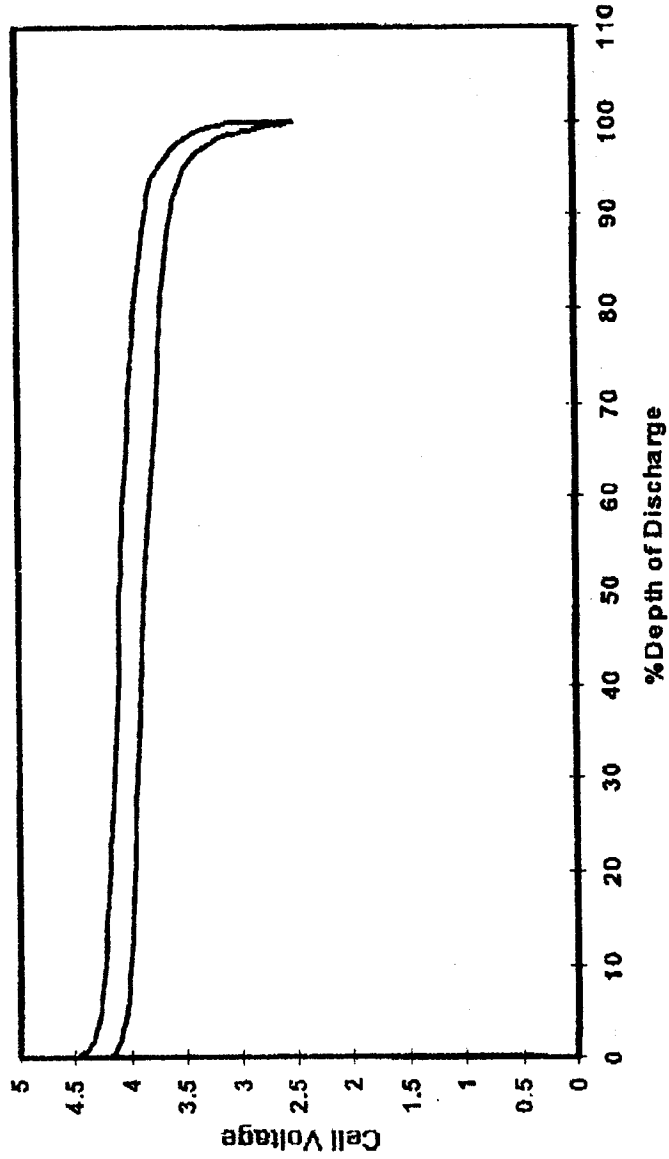


# Schematic Unit Cell



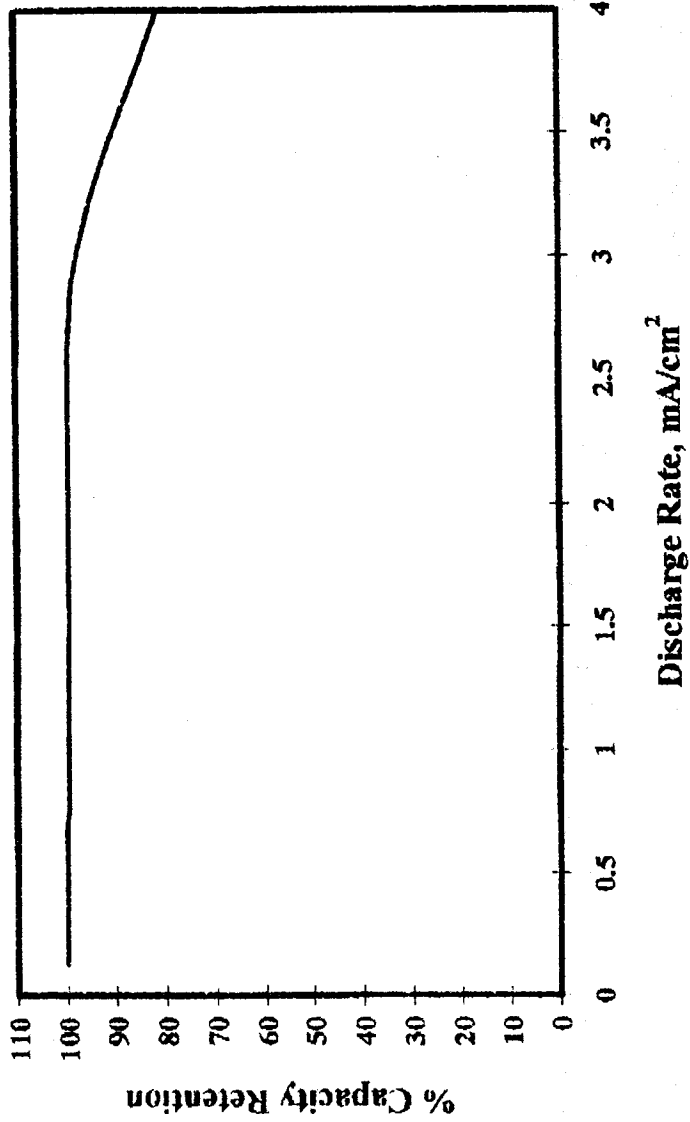


# Typical Charge/Discharge Curve





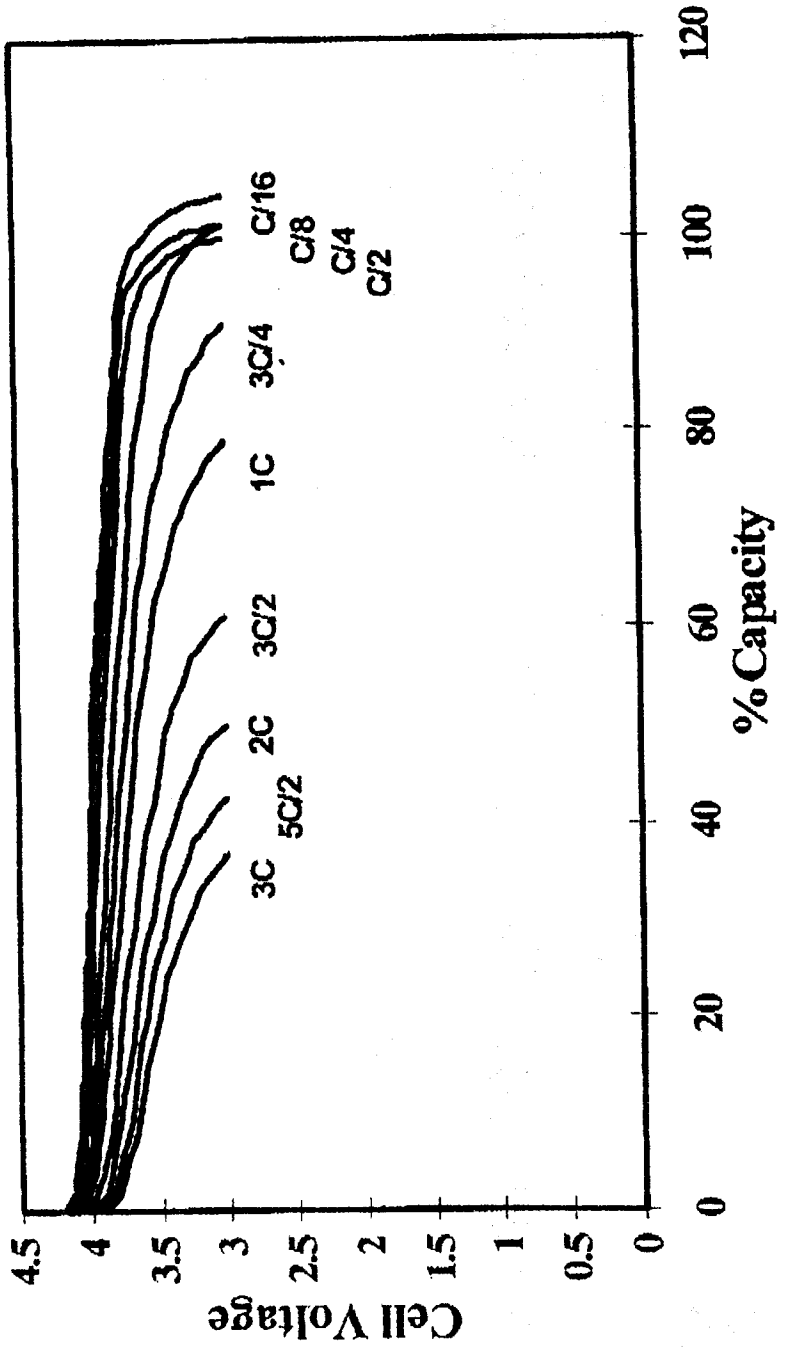
# “Signature” Curve





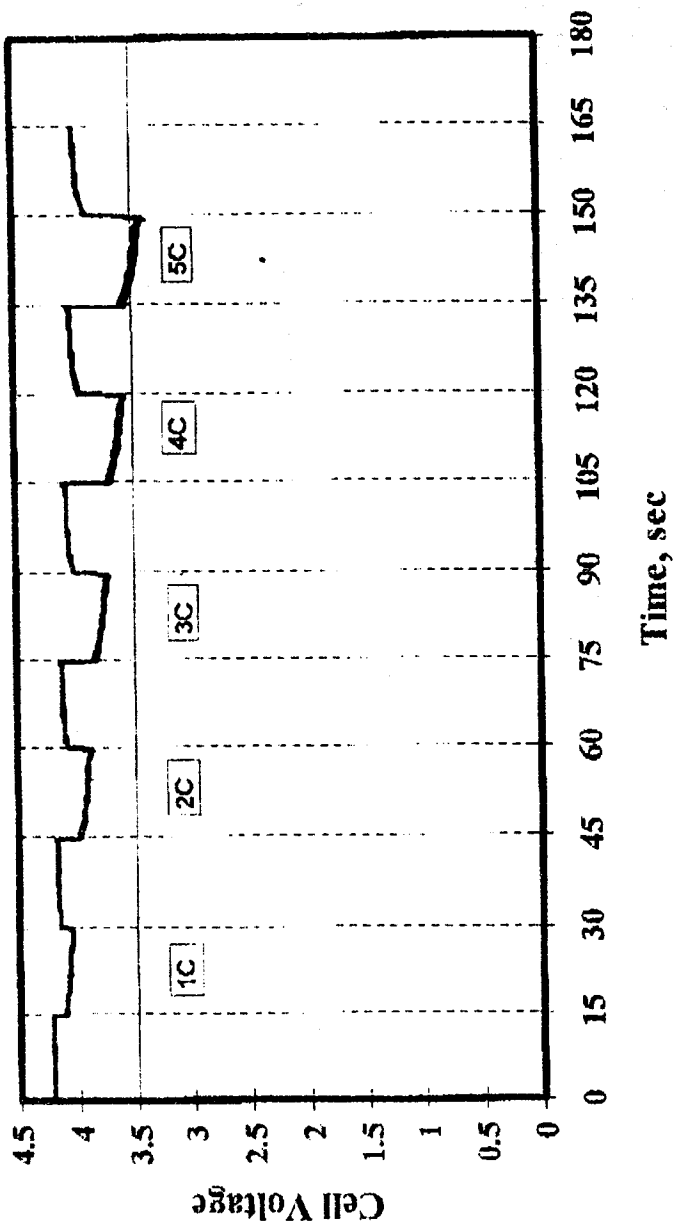


# Voltage vs. Discharge Rate

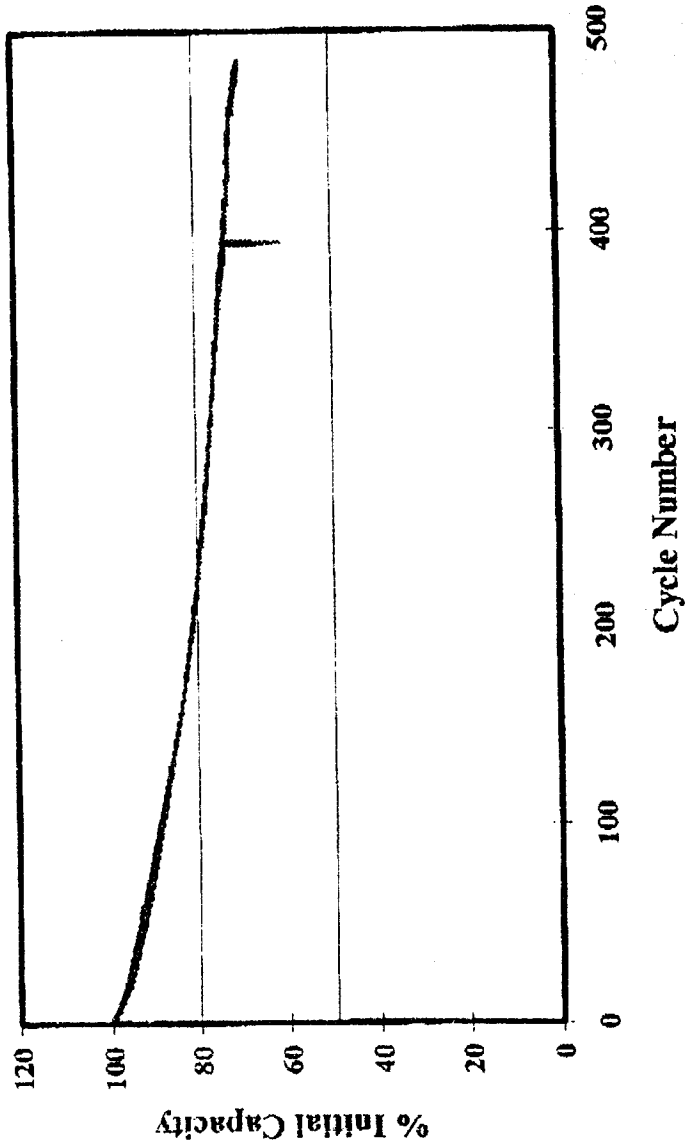




# Pulse Power Performance

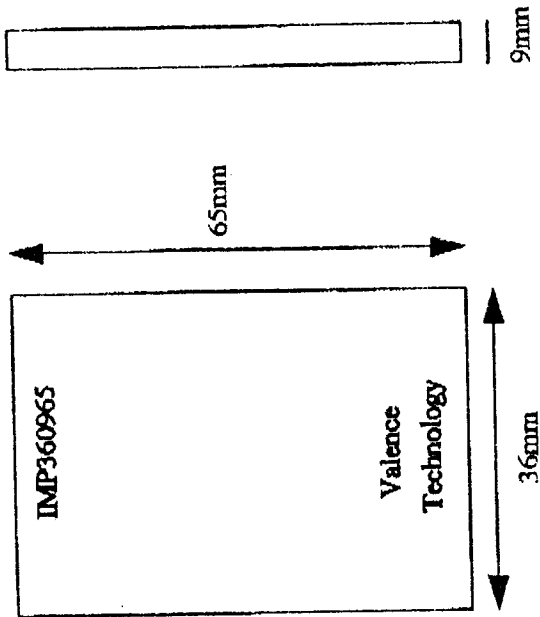


# Cycling Performance at 100% DOD



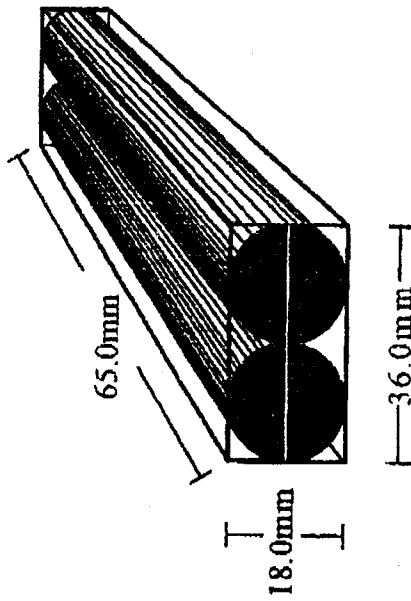


# Initial Product Design



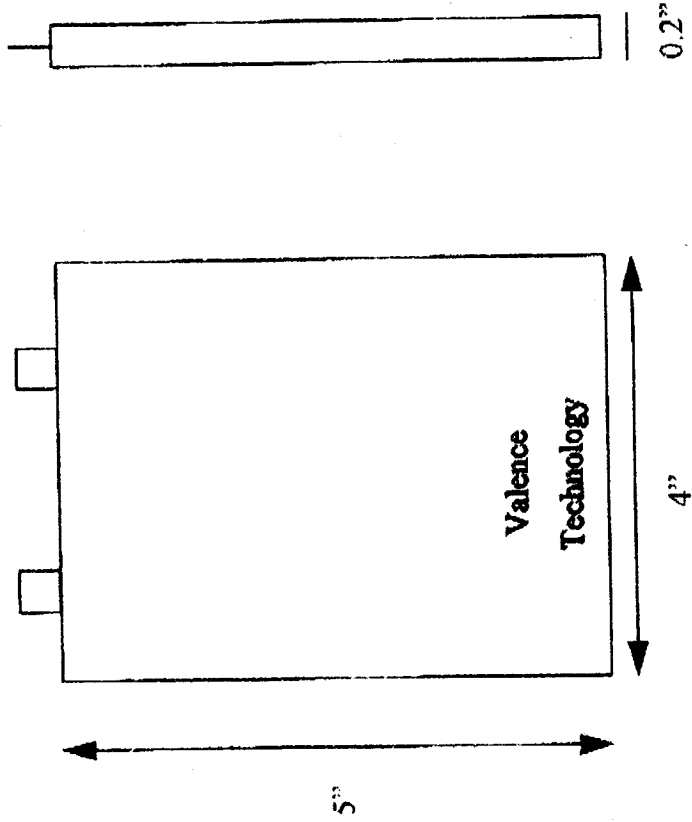


# Product Design Strategy



2 x IMP360965

# Computer Battery Design Concept





# Valence Technology



- Founded 1989
- Henderson, NV
- Mallusk, Northern Ireland
- Hanil Valence, Korea
- Valtron, Singapore
- Delphi Energy Systems



# Summary



- Technology Established
- Cell Designs Selected
- Markets Identified
- Partnerships Established
- Production Plans Proceeding