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## Panel Session IV - Exploration Transportation Systems

Mike Kahn

*Vice President of Reusable Solid Rocket Motor Program, ATK Thiokol*

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2004 SPACE CONGRESS

# Exploration Transportation System

Presented by: Mike Kahn

April 2004

**ATK**  
AEROSPACE TECHNOLOGICAL ADVANCEMENT

ATK THIOKOL INC.

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## Exploration

"The sense of exploration is intimately bound up with human resolve, and for a nation to believe that it is still committed to forward motion is to ensure its continuance."

James A. Michener

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## The Spirit of Exploration

Space Initiatives Fuel Technological Advancement

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## Achieving Our Exploration Vision

...By Taking Advantage of STS Infrastructure

- People
- Safety
- Facilities
- Cost
- Hardware
- Schedule

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## ETS Evolution

**Today**

Current STS

**Tomorrow (2008)**

Heavy Lift Carrier

160 klb Cargo LEO (6.5m x 25m)

Medium Lift Carrier

35-40 klb Cargo LEO

**Future (2011 - 2015)**

Growth

200 klb Cargo LEO (6.5m x 35m)

CEV Launch System

225 klb Cargo LEO (9m x 35m)

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## ETS Derived From STS Benefits

|  |   |
|--|---|
| <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Human-rated systems</li> <li>• Maximizes use of demonstrated and mature systems</li> <li>• Maintains focus for STS</li> </ul>                                | <p><b>Schedule</b></p> <ul style="list-style-type: none"> <li>• Existing infrastructure, workforce, and assets enable earlier start with higher confidence</li> <li>• Nearly everything currently in production</li> <li>• Allows demonstration/flight capability with STS</li> </ul> |
| <p><b>Cost</b></p> <ul style="list-style-type: none"> <li>• Low ETS added cost with ongoing STS</li> <li>• Leverage SLEP safety investments to ETS application</li> <li>• Mature/well understood infrastructure</li> </ul> | <p><b>Growth</b></p> <ul style="list-style-type: none"> <li>• Increased performance through 5<sup>th</sup> segment, longer ET</li> <li>• Multiple missions/common hardware</li> <li>• Large body of knowledge and experience for future spiral development needs</li> </ul>           |

The first step is...  
**Our Safe Return to Flight**



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