

Defining the North American HS Train

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Railway
& MASS TRANSIT
interiors
TECHNOLOGY & DESIGN
EXPO 2012

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VergaraStudio's mission is
to envision the future of
mass transportation and
to design it into reality



Railway Interiors and Design Expo 2012

Vergarastudio to present "Defining the North
American HS Train", 24-26th Oct 2012 Boston,
MA.

Caltrans



The car of the future
is a Railroad car



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- Trains *symbolize* rail transportation
- Trains constitute a small part of the cost of the system
- ID constitutes less than 1% of the cost of the trains
- ID provides 100% of the aesthetic and functionality*

- HS Trains, and their appearance have become national symbols of technology and progress
- Appearance of HS trains follow national trends
- Appearance of HS trains ***establish*** national trends
- Trains are near the top of the pyramid in aesthetic longevity , for example buildings are higher
- Following some examples



Germany: HS trains as a national symbol



France: HS trains interiors have become a national symbol



Japan: HS trains as a national symbol

Case study Amtrak Next Generation HST

- **Task:** Create *the* American symbol of modern technological rail transportation
- Completely compliant and manufacturable
- Inspire future generations to select rail travel
- **Challenge:** Must *not* copy existing trains
- Classics are not created by copying the ideas of others

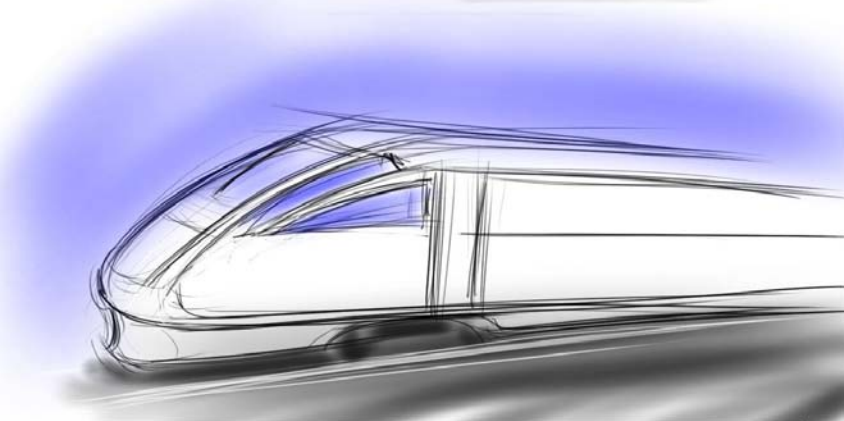
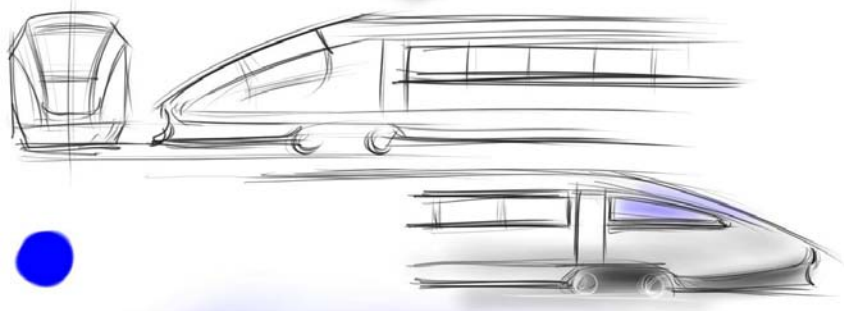
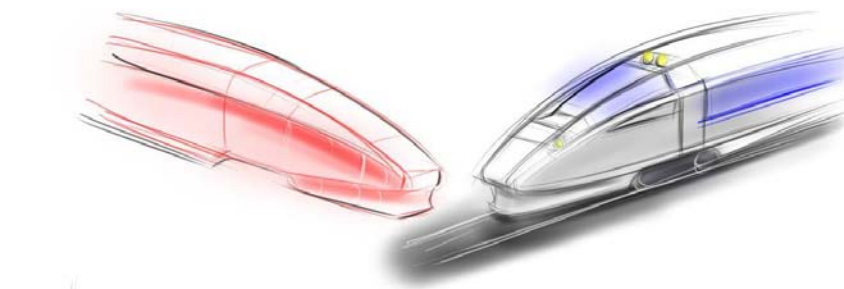


Arriving at the Amtrak Next Generation HST concept

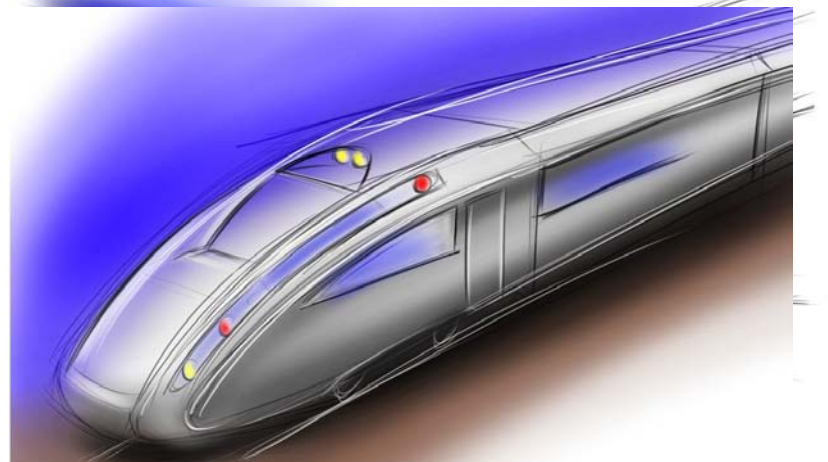
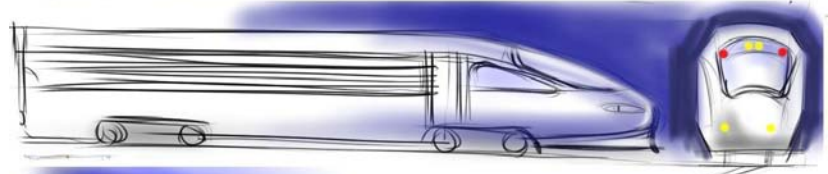
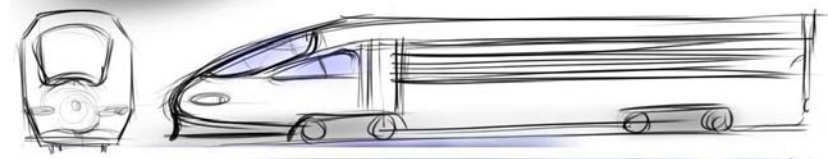
ID Concept for AMTRAK's Next Generation High Speed Trainset



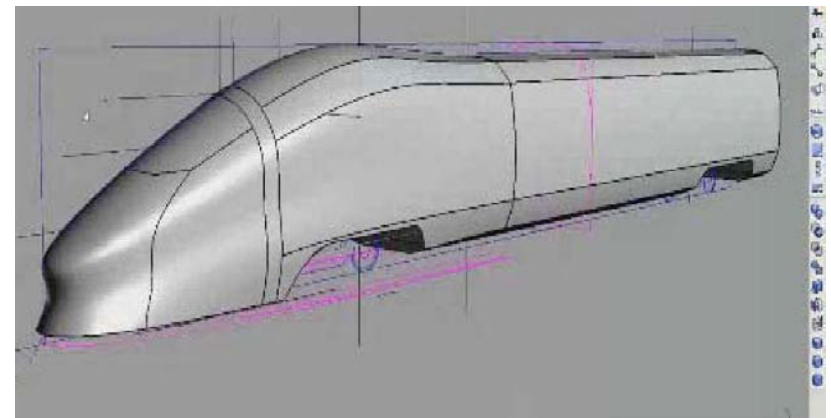
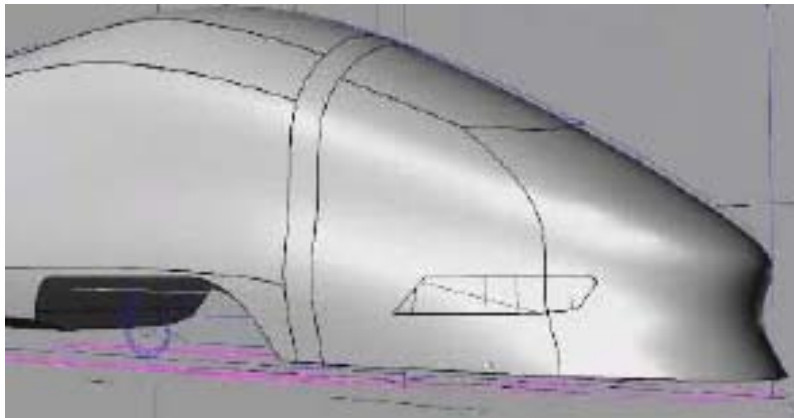
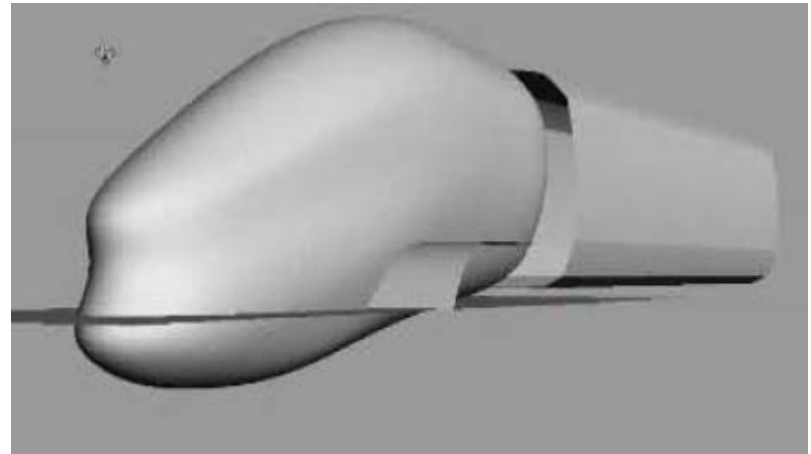
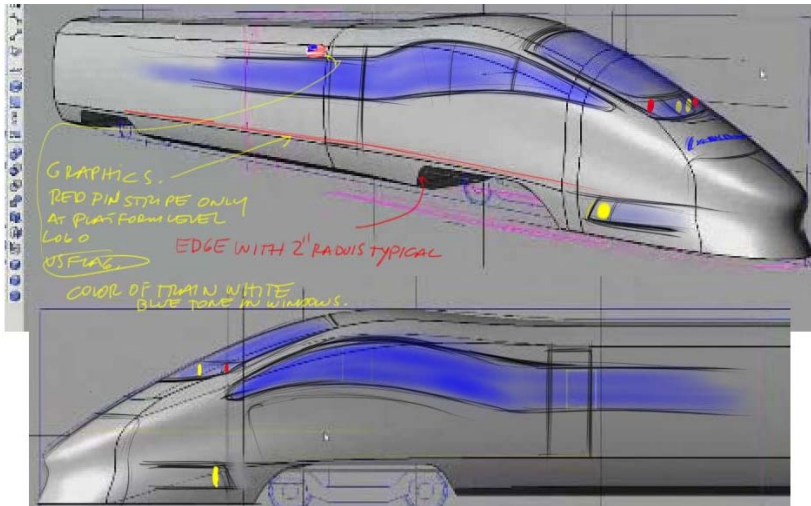
- Distributed power high-speed EMU
- 9-Car consist with Pantograph on 3rd and 5th cars
- Operator-cab floor 3 steps higher than passenger-cab floor
- Compliant field of vision from cab
- Ample length in F end for energy management systems structure
- Room under cab floor for equipment usually placed behind cab bulkhead
- Unique North American shape and graphics
- Compliant to Amtrak's NE corridor clearance



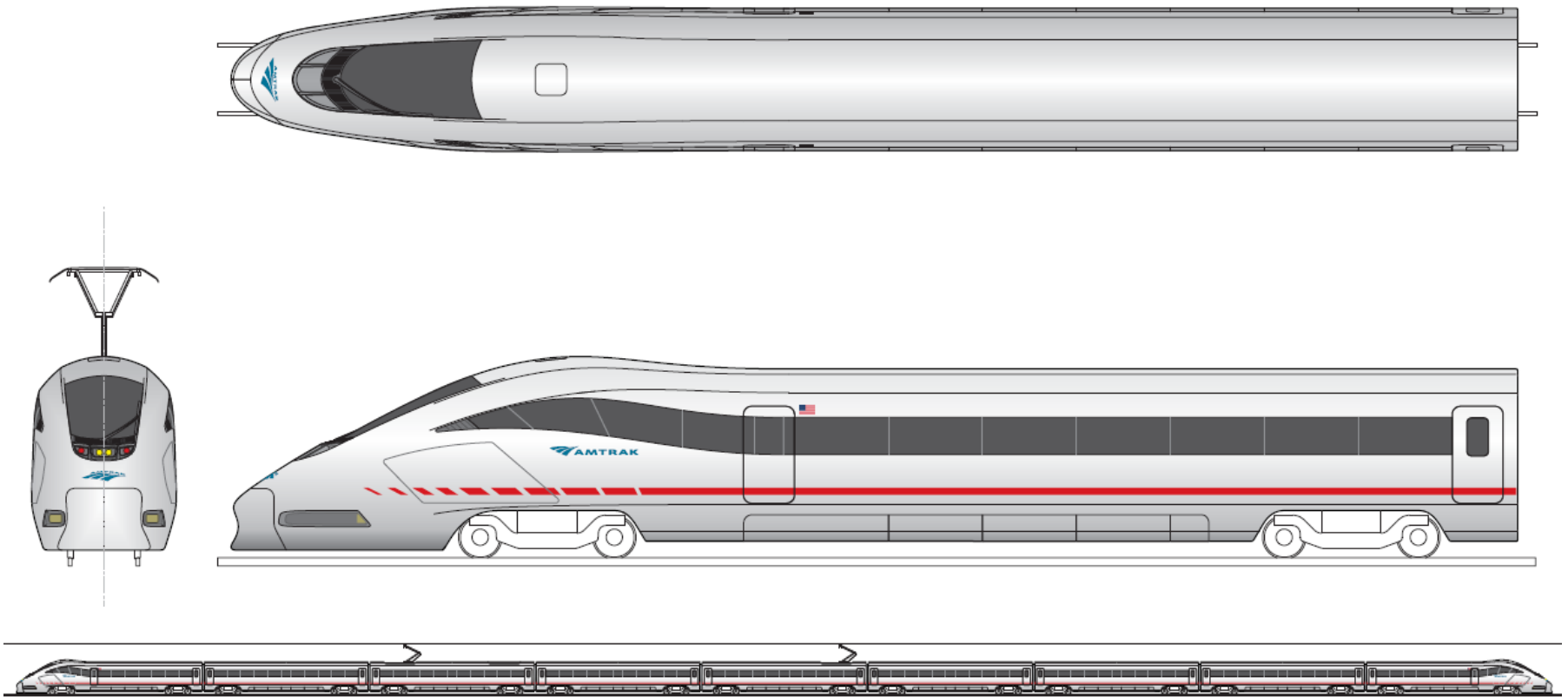
AMTRAK Next Generation HST, Initial phase, Exterior ID



From multiple sketches and critiques, starting with the exterior...



Narrow down to a single concept created in step files



- Clearance compliant
- Distributed power AGV style
- Operator cab floor higher, improving visibility and cab ergonomics
- Creates space for components usually housed in back of cab
- Crash Energy management foundation
- Aerodynamic



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Executive summary

1. ID constitutes a small investment with very large impact on the overall system
2. Trainsets: National technological icons
3. Case study Amtrak Next Generation HST, the next generation of US HS trains should have a uniquely American character
4. The Amtrak next generation HST a step in this direction.

Thank you for your attention!

