STC200 System the Smart Port Initiative

Sky Train addresses the most effective Smart Transportation initiative for Smart Ports!

As the concept of International Ship Container Transfer further expands due to the opening of the expanded Panama Canal in 2016, and with more overland ship canals planned in other countries, it is time to assess <u>a port bottleneck situation!</u>

Excess ship capacity now exists, and as shorter routes are available this also increases <u>capacity and competition.</u> This awareness has created <u>new Partnerships</u> that allow appropriate sizing of container ships (leading to increased capacity) to become more effective. Also air passenger transportation, ever expanding, is always a threat by greatly reducing travel time to destinations. Conceivably, with <u>self-driving trucks,</u> the next step will be <u>the closing of small or Marginally Performing Ports.</u>

KEEP YOUR TERMINAL IN THE GREEN ZONE™

While most container ports are limited by many varied constraints, there also needs to be a <u>Smart Port Movement that allows Customer Centricity, BTB insight, Electronics Internet of Things (IoT) and Technology to play a greater role in these arenas.</u>

While we at STC have tracked and met with Smart City Planners understanding their problems and solutions, we focus on a somewhat <u>better defined and more effective target, **Sea Ports**</u>.


Our select team has met with the port equipment manufacturers to define Fit and Function. We have; some a lifetime, our team over a decade, identified the biggest improvements.

Our evaluation started in earnest in 2001, and the design on the left below was submitted by architect Alvaro Senabria H. The design on the right is our latest rendition with the longest lead item, the composite leading <u>Crew Cab tooling already being available.</u>

<u>**Sky Train Corporation has a system design called STC200.**</u> **Over many years we have assembled associates and a sophisticated manufacturing shop to this end. Although propulsion could be Hybrid, we have the ability to go to the extreme and supply hydrogen/fuel cell or desired alternative propulsion, thus <u>enhancing the port image.</u>**

Full containers
- separated

Full containers
- separated

Empty containers
- held together
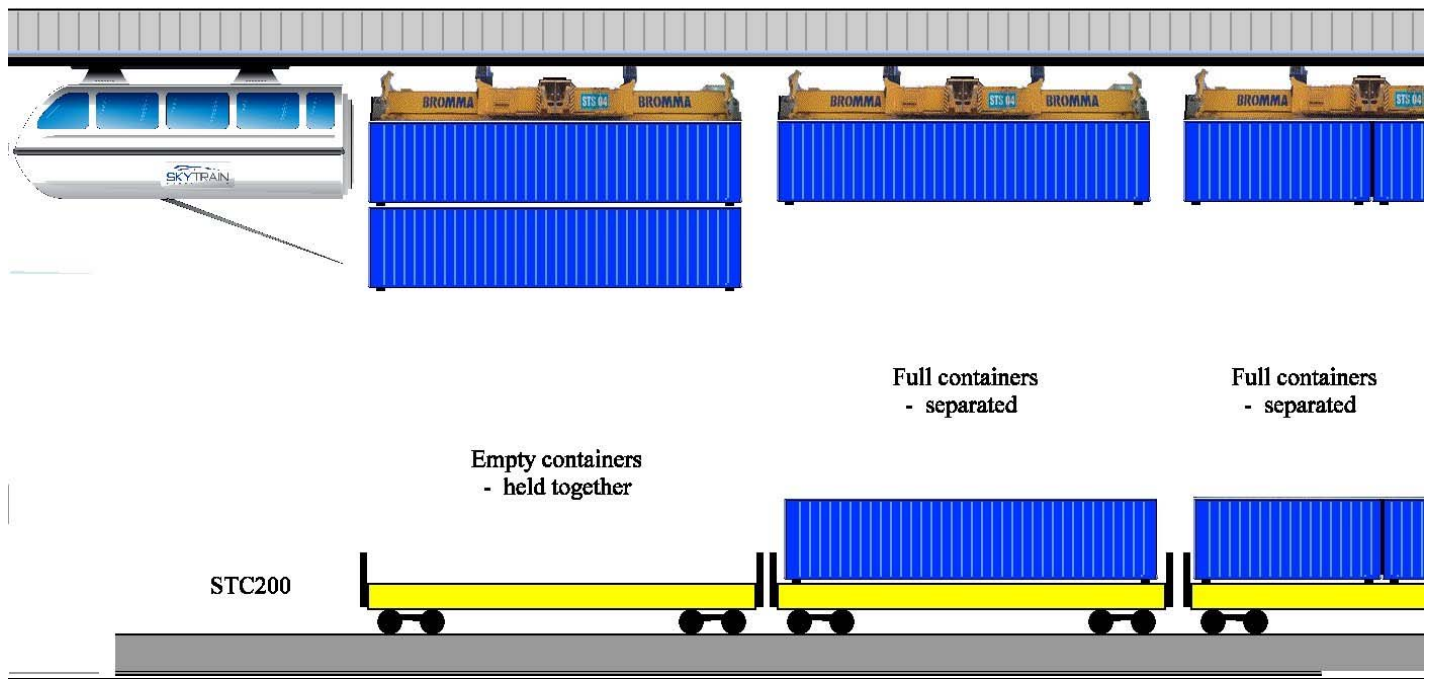
STC200

As shown below (illustrating the loading of a ship), STC envisions a fleet of Enhanced automated self-propelled rail-carried flatcars, labelled "STC200", moving individually in a circulatory fashion between the container handling cranes and transfer points, where the containers could be transferred to/from Stackers or beam carried vehicles, labelled "STC150".
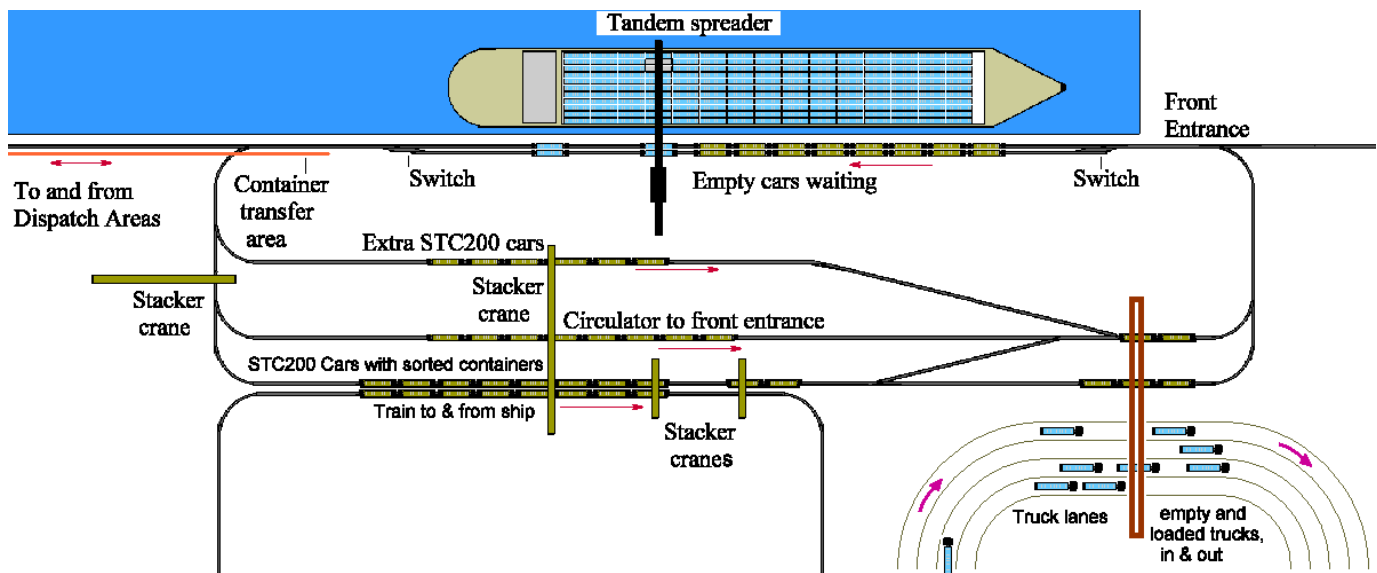
The track along the pier will consist of a rail with the following sections (from right to left):
1) A "front entrance" where the rail(s) merge;
2) A switch that separates the cars onto parallel rails with 6" or safe space in between cars;
3) The loading/unloading area, which is at least as long as the biggest anticipated ships;
4) Switches that merge the two rails into one;
5) A container transfer area using Rail Transport or Trucks for Containers & Trailers ;

We at STC and associates will select technology that solves the greatest need of the port location and <u>also</u> consider the Logistic needs of the greater region, See Video Below!

Considering a 50 or 100 year life cycle, assess costs of variable resources that could impact future cost:

- Labor.
- Automation.
- Simplicity in fare collection.
- Utility of use, the ability to handle freight speeding railroad, truck and trailer loading.
- Extending operating service hours and minimizing costs.

Also, to increase future capacity, see National ratings and locations:

- www.worldbank.org/en/news/infographic/2016/06/28/logistics-how-countries-stack-up?CID=ECR_TT_worldbank_EN_EXT&utm_content=buffer5a973&utm_medium=social&utm_source=linkedin.com&utm_campaign=buffer World Logistics
- INTERACTIVE WORLD RANKING MAP: https://datawrapper.dwcdn.net/6XK7o/5/
- IDC WHITE PAPER The Extended Supply Chain: Download White Paper Now!
- Video for 4.25 minute Overview: Watch Now!