



STS

Innovation In Motion

Sydney, May, 2010

Opening Date: 5 May, 2010

OFFER DOCUMENT

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**This is an Offer to issue Securities in the form
of Ordinary Shares in**

String Transport Systems Limited

Open for Sophisticated and Professional Investors only. ACN: 142 651 812

String Transport Systems Limited intends to raise A\$5,000,000 through this Offer Document:

Round 1

5,000,000 @ \$0.04 per Ordinary Share in return for the capital contribution of **\$200,000**

Round 2

3,333,333 @ \$0.06 cents per Ordinary Share in return for the capital contribution of **\$200,000**

Round 3

38,333,333 @ \$0.12 per Ordinary Share in return for the capital contribution of **\$4.6 Million**

Note:

Rounds 1 and 2 are open and being offered *consecutively* as each Application is received. The Company may elect, at its sole discretion, to offer Securities for Round 3 (or more) pursuant to s708 of the Corporations Act 2001 (Cth) (hereinafter 'the Act') or to any sophisticated, professional or other excluded investors pursuant to section 708 of the Act. Any such Offer may be made through a Supplementary Offer Document or an Investment Memorandum. Should there not be any sophisticated, professional investors or remaining concessions, an additional Round/s may be made under full disclosure.

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ASIC CLASS ORDER 02/273 INVESTOR WARNING: Investment in new business carries high risks. It is highly speculative and before investing in any project about which information is given, prospective investors are strongly advised to take appropriate professional advice;

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Prospective investors should be aware that no established market exists for the trading of any securities or scheme interests that may be offered; and
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ASIC CLASS ORDER 02/273 PROMINENT STATEMENTS: The information contained in the Publication about the proposed business opportunity and the securities or scheme interests is not intended to be the only information on which the investment decision is made and is not a substitute for a disclosure document, Product Disclosure Statement or any other notice that may be required under the Act, as that Act may apply to the investment. Detailed information may be needed to make an investment decision, for example: financial statements; information about ownership of intellectual or industrial property; or expert opinions including valuations or auditors' reports.

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ELIGIBLE SHAREHOLDERS

SECTION 708 of the Corporations Act 2001

"This Offer is open to s708 excluded investors only pursuant to the Corporations Act 2001."

Letter From The Managing Director.....	5	22. Creation and Issue of Further Shares.....	33
Executive Summary.....	6-7	23. Other Company Information.....	33
1. String Transport Systems Limited.....	8-10	24. Risk Analysis.....	34
2. Is There a Need for New Transport Infrastructure?.....	10-12	25. Round 1 –Strategic Growth Plan (SGP).....	35
3. String Rail as a Transport System.....	13	26. Round 2 – Strategic Growth Plan (SGP).....	36
3.1. Overview.....	14-15	27. Round 3 – Strategic Growth Plan (SGP).....	37
3.2. Background to the Optimized Transport System.....	15	28. Cooling off Period.....	38
3.3. Progressive Development of the String Transport System.....	16	29. Legal Jurisdiction.....	38
3.4. Design and Engineering development.....	16-17	30. Glossary of Terms.....	38-39
3.5. Benefits of String Rail Transport.....	18-20	31. Who to Contact.....	39
4. Business and Marketing Strategy.....	20	32. Directors Declaration.....	39
4.1. Overview.....	20-22	Appendix 1: Patents and Technology.....	40
4.2 Strategic Alliance – Promet Engineers Pty Ltd	23	Appendix 2: TRIZ and its Application to String Rail Transport.....	41-43
4.3. Port Expansion and New Projects.....	23-24	Appendix 3: TransRapid Project and Comparables.....	44
4.4. Phase 1: Design and Engineering of a Demonstration track.....	24-25	Appendix 4: Inventor and Founder Profile – Anatoly Unitsky.....	45
5. Financial Projections.....	25	Appendix 5: Expert Opinion	46-49
6. Board of Directors and Management.....	26-27		
7. Corporate Governance/Continuous Disclosure.....	28		
8. Financial reporting to Shareholders.....	28		
9. Company Incorporation.....	28		
10. Purpose of Capital Raising.....	28		
11. Minimum Subscription Requirement.....	28-29		
12. The Offer.....	29		
13. Use of Proceeds.....	29-30		
14. How to Apply for Shares.....	30-31		
15. Opening and Closing Dates.....	31		
16. Average Investment per Investor.....	31		
17. Average Shareholding per Investor.....	31		
18. Limited Liability.....	32		
19. Ownership Structure.....	32		
20. Dividend Policy.....	32		
21. Exit Strategy – Am I Able to Sell my Shares?.....	32		

LETTER FROM THE MANAGING DIRECTOR

Dear Investor,

It is my pleasure to invite you to become an investor in our mining services company, String Transport Systems Limited. The Company has been established to commercialise the last 33 years of research, development, design, and engineering of an optimized transport system called String Transport Unitsky, (STU) - a low cost, pre-assembled transport system.

STU has been developed in Russia and includes a suite of over 100 inventions, protected by 43 patents, in passenger and freight transport systems as well as significant technical "know how" in materials and technology application. It has been awarded two rounds of United Nations HABITAT grant funding and a number of important transport innovation awards, including a technical feasibility expert report from the Moscow Institute of Engineering Transportation.

String Transport Systems is now embarking on the next stage in the journey – the building of a commercial scale String Transport System based on STU technology. Whilst STU technology is applicable to both passengers and freight, the mining / freight application offers a number of adoption advantages including lower regulatory, economic, and speed to market barriers.

Commercially, in Australia initially but also other regions, we see string transport technology as having large and near term potential benefits to the booming mining industry. Australia is a top-5 global producer of most of the major minerals, particularly iron ore and coal, and is poised to take advantage of another surge in demand for commodities. However Australia's ranking as a global supplier of these commodities is at risk and can only be maintained if key infrastructure for the transport of these commodities is both available and priced at a reasonable cost.

Some infrastructure investment is already proceeding, including planned port expansions in the Pilbara iron ore region for 2014-2015 and coal export port expansions and new terminals at Abbot Point and Dudgeon Point in Queensland. However getting ore to port remains difficult and STS plan to service that large

market with the provision of lower cost transport systems and haulage operations using string rail transport technology and infrastructure.

It's a big goal, but the lack of available and economic rail transport in these regions and the difficulty in expanding conventional rail transport to service the deposits of growing mid-tier miners provides STS with an unmistakable opportunity. Within this Offer Document we are pleased to introduce you to the innovations of string transport technology and the potential that STS has to change the transport landscape for the Australian mining sector.

Investors are urged to read this document carefully and in its entirety before making an investment decision. Commercialisation of technology is both risky and exciting. As in most mining projects and mining services it is "High Risk – High Reward". Our team are certainly committed and excited about the future of string rail transport and I look forward to welcoming you as an investor in String Transport Systems Limited.



Yours faithfully,

Dr. Anatoly Yunitskiy PhD

String Transport Systems Limited (STS) is seeking to raise \$5 million (Phase 1 funding) as part of an overall funding package of up to \$30 million for the design, engineering, construction and testing of a commercial scale “String Rail” transport demonstration facility.

Transport infrastructure is expensive to build, and then costly to operate and maintain. It’s also usually a time consuming process for environmental and commercial approvals and the construction. But the lack of adequate infrastructure is debilitating for a nation.

The Australian mining industry, one of the largest in the world, is affected by all of these problems – expensive infrastructure, complicated environmental approvals due to significant land impact, costly maintenance, and difficulty in getting access to existing rail track. Not only are profits and exports reduced through inadequate infrastructure, but many resource projects remain transport –limited or even stranded, simply “stuck in the ground” without adequate or economically feasible transport available.

“String Rail” technology comprises designs, patents, and knowhow in new rail technology for rail, rolling stock and other network components. It is scalable, low cost, low energy, environmentally sensitive and rapidly deployable rail infrastructure for passenger, freight and bulk commodity transport.

Created and designed over three decades by technology designers String Transport Unitsky LLC (STU) of Russia, String Transport Systems Limited (Australia) is commercializing the technology for the mining and freight sector with an initial focus on the Australian resources industry. Specifically, iron ore and coal haulage applications provide the immediate opportunities. STS hold an exclusive, global and perpetual license to the STU technology for freight and bulk transport operations.

This commercialization involves two key activities, a) the design, engineering and construction of the world’s first full scale and full length string rail system and b) concurrent project identification and commercial engagement with the industry. The demonstration project will be conducted in two phases:

Phase 1 (to be funded by this offer) will include the design and engineering of a commercial scale demonstration track to be undertaken by STU LLC and other tasks essential to site selection and approval for construction. It is estimated that this process could take 12 months and cost approximately \$5 million.

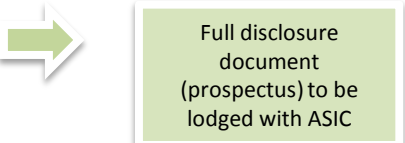
The Phase 2, being project construction, will commence with site development approval and the availability of project funding. Phase two is to cost AUD \$30 million depending on final project design and other contingencies. Phase 2 funding is to be raised during the Phase 1 design and engineering development and could involve a number of potential equity, debt or partner sources of funding.

Commercial market engagement will be undertaken in a number of ways, but especially with Promet Engineers Pty Ltd (Promet). Promet is an industry leading mining engineering services business managing mine construction, project management, scoping and feasibility studies. STS have a binding agreement with Promet to develop bulk haulage projects using the STU technology and will benefit greatly from their iron ore experience, local industry knowledge and direct client relationships. This activity has already begun.

The availability of a string transport rail system for bulk commodity haulage will have a significant impact on junior and mid-tier miners struggling to bring identified resources to production. This is especially the case in areas of identified export growth such as the Pilbara in Western Australia (iron ore) and Bowen and Galilee Basins in Queensland (coal). Competitively, even if conventional rail haulage was either made available or could be built, string rail transport is almost certainly likely to be of much lower cost. This will open up new mine projects, improve existing mine projects and overall increase Australian exports at a time of great demand.

The team behind STS includes the founder of STU LLC and inventor of string rail technology, the renowned Dr Anatoly Yunitskiy and access to his STU LLC team of experts. Locally, STS have an Executive Board that has developed the opportunity specifically for the Australian mining industry and established the relationships needed to succeed.

String Transport Systems vision is to grow rapidly reflecting the urgent need in the market for better and alternative transport solutions and to become an industry leading supplier of those haulage solutions. This will involve a number of growth phases as the company scales from demonstration to commercial contracts, and opportunities for early investors to see their value within the company grow commensurately.

Stage of Development	Anticipated funding platform	Funds to be raised	Use of funds
<p>PHASE 1</p>	<p>ASSOB</p> <p>Round 1 Round 2 Round 3</p> 	<p>\$5 million</p>	<p>Design, Development and preparation of project documentation Commercial engagement with industry Securing first haulage contract</p>
<p>PHASE 2</p>	<p>Range of financing instruments including progressing to a listing on an Australian or other appropriate exchange.</p>	<p>\$30 million estimated project costs – to be finalised during Phase 1.</p>	<p>Demonstration track construction Progressing to first commercial contract</p>

1. STRING TRANSPORT SYSTEMS LIMITED

The Company

For three decades the String Transport Unitsky LLC (STU) of Moscow, Russia and its founder and inventor Dr Anatoly Yunitskiy have been developing the principle of "String Transport". These works have produced designs and technology for lighter, faster, cheaper and more environmentally sustainable transport systems and are reflected in numerous patents, designs and Awards won by STU and Dr. Yunitskiy. His doctoral work was on "The Optimization of Transportation"

A brilliant scientist, Dr. Yunitskiy graduated as Bachelor of Engineering of Transport Infrastructure, he also holds Bachelor of Law in Patent Law and IP protection. He holds the highest level of membership (Academician) of The Russian Academy of Natural Sciences and is also a member of the USSR Federation of Cosmonautics.

Dr. Yunitskiy has an honorary award the "Knight of Science and Art" by The Russian Academy Of Sciences. He is a prolific Author of more than 100 publications in scientific and popular scientific journals and of five scientific monographs. Other famous scientists to hold the title of Academician in The Russian Academy of Natural Sciences include 26 Nobel Laureates such as form USSR President, Mikael Gorbachev.

Having served a distinguished career in Public Service and Government Institutions, Dr.Yunitskiy commenced work on the String Transport System as the General Director and General Designer. He has built a highly skilled project team at String Transport Unitsky LLC in the fields of civil engineering, mechanical engineering, architecture, structural engineering, finite element analysis and automotive engineering. All of these disciplines are critical to the design and engineering of the upcoming demonstration track in Australia.

STU LLC has vested their considerable Intellectual Property and a number of tangible and intangible assets (including 43 patents protecting some 100 inventions relating to string transport technologies) into the creation of String Transport Systems Limited.

At the core of this technically advanced transport system is "String Rail". String rail is applicable to a number of transport applications and with respect to bulk haulage of iron ore and coal is expected to provide significant capital and operational cost savings compared to conventional road and rail haulage.

In the Australian market, many mid-tier and junior miners simply don't have access to or can't afford to build rail transport infrastructure necessary to haul their ore to port. Significant environmental impacts associated with conventional transport is a further complicating factor and these key infrastructure issues have been identified by the Minerals Council of Australia as an impediment to the mining sectors growth.

In such a scenario Australia is at risk of losing market share in the global supply of minerals. In short, a lack of key infrastructure puts at risk the ability for Australia to capitalize on the mining boom being fuelled by Chinese demand for construction material inputs and other developing nation growth.

A recent comment by the Governor of the Reserve Bank of Australia ... **"a once-in-a-century build-up in resource sector investment"** It is the timing of this opportunity, and the infrastructure shortages facing the Australian resources industry, that create the perfect launching pad to demonstrate STU's technology and the use of string rail transport systems in tendering for multi-year haulage contracts. As you read though this document you will discover that STS has several unique design elements that offer many benefits to mine operators for their haulage solutions.

STS's goal is to demonstrate to the industry that string rail technology provides a low cost and rapidly deployable transport solution. The costs and risks in STS demonstrating that capability are greatly reduced by the expertise in design and engineering that will be carried out by the team at STU LLC. The following diagram illustrates the corporate arrangement in place between STS and STU to deliver this opportunity.

1. STRING TRANSPORT SYSTEMS LIMITED

Exclusive, global, IP Licence / Arms length royalty Agreement on Net Sales of STU technology
Engineering and Design Services / Contract for Engineering and Design

String Transport Systems Limited
(Australian Public Company)



String Transport Unitsky LLC
(Russian Federation)

String Transport Unitsky is an award winning design and engineering company and has developed the STU technology for string rail transport.

Highlights include:

- 2 UN HABITAT project grants
- 2 “Russian Mark” awards for engineering excellence
- The “Golden Chariot Award” for Transportation Engineering

Company capabilities include:

- Design and innovation
- Civil engineering
- Mechanical engineering,
- Architecture,
- Structural engineering,
- Finite element analysis
- Automotive and rail engineering

Directors

- Dr. Anatoly Yunitskiy (Managing Director)
- Victor Uzlov (Operations Director)
- Vladimir Romachko (Director & CEO)
- Michael McBride (Director & Company Secretary)



String Transport Systems Limited will commercialize the STU technology by providing bulk haulage equipment and services to the (initial) market of the Australian mining and resources sector.

Three initial activities are planned:

- Phase 1:** Full design and engineering of a demonstration track and facility
- Phase 2:** Construction of the demonstration track and facility
- Ongoing:** identify opportunities for string transport haulage services.

To serve this huge market need STS will undertake three initial activities:

Phase 1:

Design, (using existing knowhow, technology and designs) to complete the engineering specifications of a string transport rail system for the haulage of bulk commodities (activities to be funded by the capital raising the subject of this Offer Document)

Phase 2:

Build a fully operational and full scale demonstration line to this design (to be funded by a further capital raising likely to include an ASX listing and a number of strategic partnerships), and

Concurrent Industry Activity

With our strategic partners, identify which mine owners present a commercially viable opportunity for string transport systems to supply haulage services for coal or iron ore.

1. STRING TRANSPORT SYSTEMS LIMITED

STS Vision

String Transport Systems' **vision** is to build, own and operate rail haulage networks that provide transport solutions for miners who currently are limited in their available options. This will involve the use of STS patented technology to construct pre-assembled, low cost string rail infrastructure that provides high volume, low impact, rapid build and low cost services for the bulk haulage of their commodities.

The key criteria and benefits of an STS rail transport system is that it:

- Uses much less construction material (steel, concrete, ballast, earthworks)
- Requires lighter and faster trains creating less damage to track structure and lower maintenance

- Uses much less energy for transport and has lower emissions due to aerodynamic efficiencies
- Increases the transport networks capacity of an operation with more efficient track utilization

and which has

- A low environmental impact (the track can be elevated avoiding heavy earthworks and embankments and emissions) are reduced due to lower energy consumption, and
- Greater flexibility to deploy across a greater range of terrain and weather conditions less likely to be flood affected due to elevation

2. IS THERE A NEED FOR NEW TRANSPORT INFRASTRUCTURE?

Absolutely!

A vibrant minerals export sector is important to Australia's economic wellbeing

The mineral sector is important for Australia, contributing 8% of GDP and \$111,500,000,000 of exports¹. It is also an industry that directly employs 130,000 people, and indirectly provides employment to at least 330,000 more. In brief, Australia is an exceptional supplier of commodities in a time of large developing world growth.

Yet the industry has many challenges, especially access to haulage infrastructure. Whilst there are massive proven reserves in the ground waiting for the necessary infrastructure to unlock this wealth there is a David v Goliath battle for access to rail infrastructure, being played out in the media and the courts in the iron ore sector.

Recognizing these issues the peak industry body, the Minerals Council of Australia,

launched **the Vision 2020 Project**² in 2007. Phase 1 of the project delivered an Access Economics Pty Ltd report in May 2008 assessing supply and demand scenarios through to 2020. In summary, it found that Australia had "fumbled the ball" and faced a risk of greater erosion of our global ranking. In particular:

"A key message from this report is that Australia has to get the supply chain management right. This means resolving issues around infrastructure development, regulation and ongoing management....."

¹ (Minerals Council of Australia 2009-2010 forecast)

² http://www.minerals.org.au/mca_2020_version/index.html

2. IS THERE A NEED FOR NEW TRANSPORT INFRASTRUCTURE?

Maintaining Australia's global ranking is dependent on new infrastructure development

Phase 2 of the Vision 2020 project, delivered through a report in May 2009 by ACIL Tasman Pty Ltd, was an Infrastructure Audit. The report observed:
"Expansion of the nation's infrastructure (hard and soft industrial and community infrastructure) has not always kept pace with the rapid and sustained growth in export and domestic demand. Consequently, many growth regions around Australia now have significant infrastructure constraints."

STS has a natural focus on Iron Ore and Coal Mines

Coal and iron ore contribute around 66% of Australia's mineral export dollars even under and a number of infrastructure constraints. Ship waiting times on Australia's east coast coal ports can average up to 2-3 weeks. The port and rail access arrangements in the Pilbara region of Western Australia and the Bowen Basin Coal producing region of Queensland have been widely commented on in the media, courts, and have been promised investment for years.

String Transport Systems believes that all miners, and Australia, would benefit from cheaper, more efficient and cost-effective sustainable transport options. But in particular, emerging miners and those with transport limited deposits could, with better access to rail and port facilities, become the economic driver of sustained mineral export and economic growth in Australia.

Sydney Morning Herald journalist Elizabeth Knight noted this when she wrote ***"Difference between minnows and whales in iron ore comes down to rail and ports!"***³ ***Aurora was valued on its pre paid port access only; its proven resources were discounted totally because they were just too far from port to be viable.***



³ Sydney Morning Herald. March 11, 2010

2. IS THERE A NEED FOR NEW TRANSPORT INFRASTRUCTURE?

Several port expansions and new developments are now underway or under planning and there is of course a need to have suitable transport infrastructure for getting ore to port in many transport corridors. These are the exact type of projects that with the funding from this offer, STS will commence discussions with the relevant parties so we may tender to be the rail bulk haulage provider for the miners.

Conventional haulage options, such as rail and road transport, are limited

Getting mineral products to ports in Australia is not a simple process. Often long distances must be traversed, over rough ground, and in isolated regions. Additionally, the environmental impact of transport corridors is an increasingly important consideration for new projects. Recently a proposed rail haulage network for a Galilee Basin project was not awarded the necessary environmental approvals due to the disruptive consequences of a traditional railway line through eco sensitive areas. This had a profound financial impact with the next transport corridor to a port an additional 200km (or more) and more away ⁴.

STS believe that when you look at the difference between the land used and the significantly lower amount of earthworks to deploy a string transport systems that we will assist miners in meeting their environmental obligations by lowering the overall impact, at construction, during operation and also making it much easier to restore at the end of mine life.

In many circumstances conventional rail transport faces difficulties including:

Extensive Capital costs – both below rail and above rail (rolling stock)
Operating costs – especially the maintenance costs of a heavy rail system and heavy fuel use.
Asset ownership, operation, and access issues

The opportunity for String Transport Systems is clear

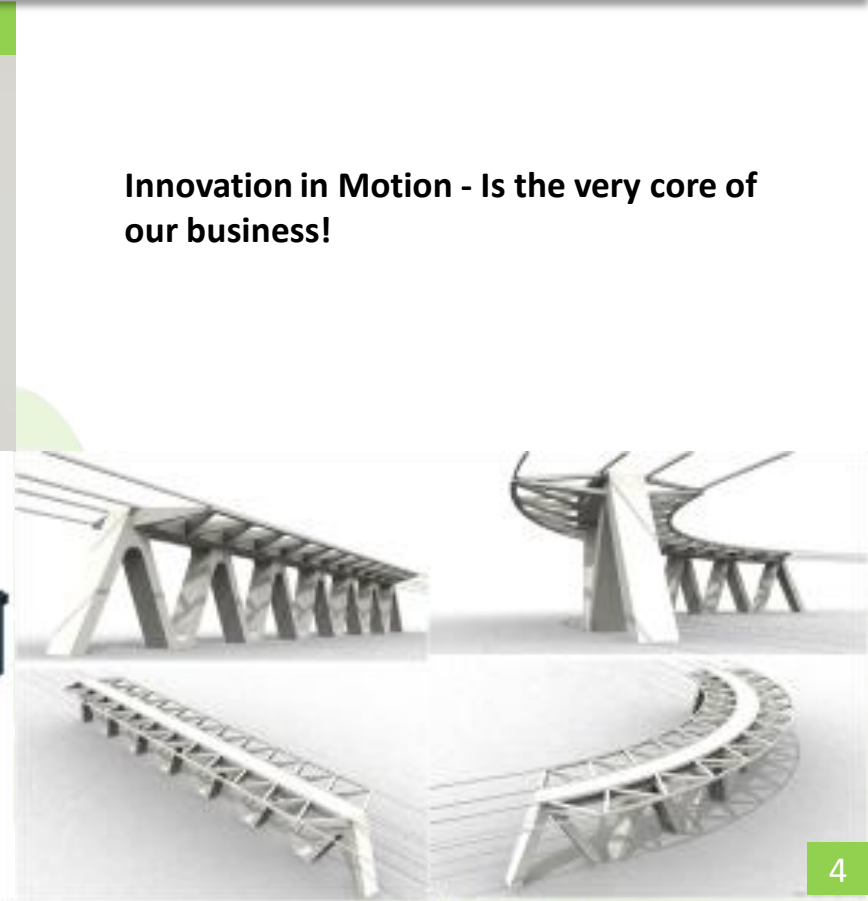
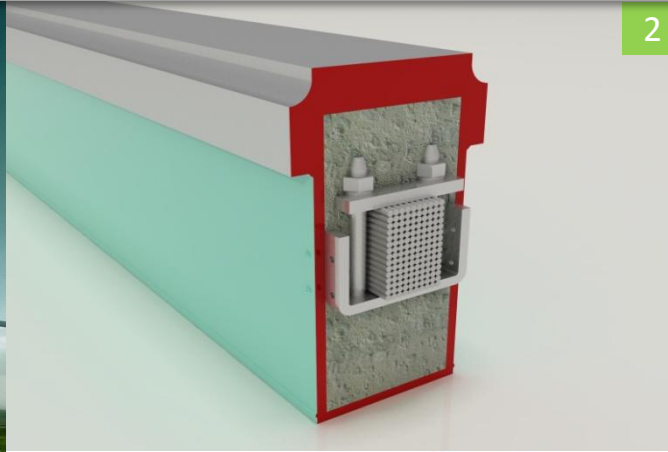
The market opportunity for alternative transport infrastructure is clear. To meet this demand, in the next 24 months String Transport Systems will design, and engineer, and then construct, a full scale string rail demonstration system. The

location and approvals necessary for construction of this system will be identified as part of the Phase 1 design and planning activity.

This Phase 1 capital raising is the formal start of that process and will provide funds for the detailed design and engineering work, technical specifications and the planning and site selection process.

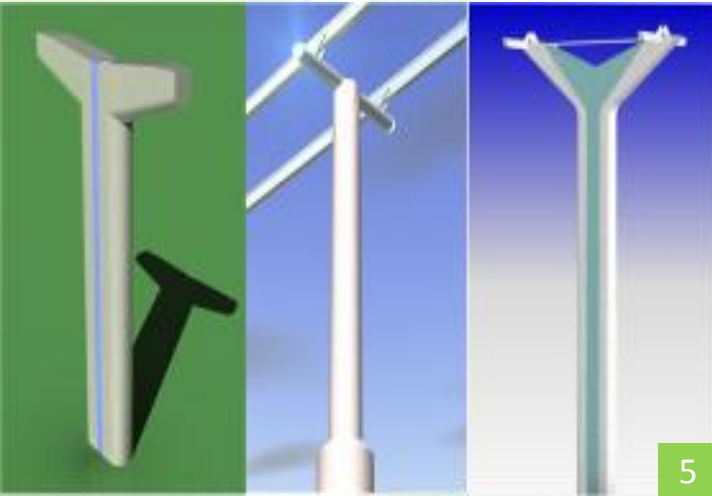
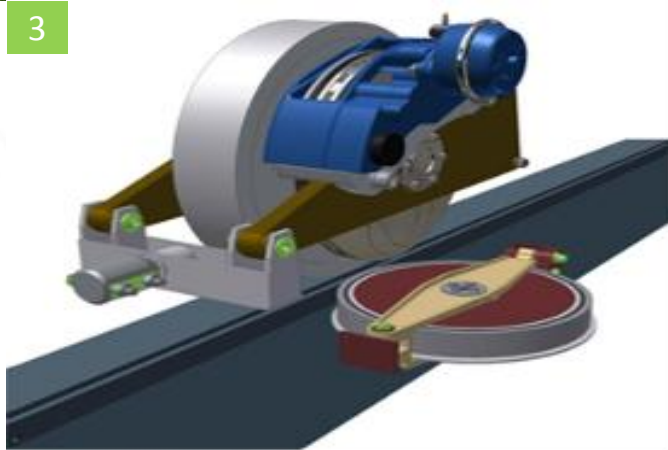
⁴ That proposal was declared a significant project on 18 July 2008 but was subsequently rejected by the Commonwealth Minister for Environment, Heritage and the Arts on account of unacceptable impacts in the Shoalwater Bay region.

3. STRING RAIL AS A TRANSPORT SYSTEM



Innovation in Motion - Is the very core of our business!

- 1. Aerodynamic Rolling Stock,
- 2. String Rail,
- 3. Steel Wheel/Steel Rail Pair,



- 4. Tensioned Anchor Supports,
- 5. Intermediate Pre-Cast Supports,
- 6. Wind Tunnel Testing

3. STRING RAIL AS A TRANSPORT SYSTEM



Examples of ballast and embankment requirements for conventional rail and a ballast tamper. A ballast tamper is used to repack ballast under a rail track and its sleepers and is an example of the type of equipment and industry that has been developed purely to support the high maintenance requirement for conventional rail systems.



Iron ore train derailment in Pilbara

3.1 Overview

All components of a string rail system are expertly designed and optimised. They remove the need for several high cost components common and usually essential to conventional rail transport technology.

For example, conventional rail requires a process that constrains a heavy steel beam, on many sleepers, which are placed on top of ballast stone, that has itself often been built into a large earth embankment. This is done to reduce the amount of deflection on the rail when a train passes over it.

Heavier axle loads on wagons require stronger support which all leads to increased infrastructure costs. Even then, after all this expense, these components still require substantial maintenance including activities such as rail grinding, gauge measurement, rail alignment in fluctuating temperature conditions, sleeper maintenance and replacement, ballast tamping and cleaning, ballast recycling and replacement, and embankment monitoring and repair (especially in wet weather). This maintenance activity involves frequent and substantial equipment, labour and time costs and yet can still fail to prevent derailments and accidents.

A string rail system is designed to remove much of the inherent difficulties of conventional rail design and in the process delivers substantial maintenance savings.

For example, in a string rail system the tensioned string rail itself is multifunctional and along with the anchor and intermediate supports, performs the functions of the rail, sleeper, ballast and embankment. The pre-tensioned string rail, is designed according to the load, speed and network capacity requirements as are the distance between anchor supports and intermediate supports. Together they reduce load deflection and consequently the other components of a conventional system become obsolete. This reduces material costs, earthworks, land usage, and material and maintenance requirements.

3. STRING RAIL AS A TRANSPORT SYSTEM

The calculations for tension requirements, distances between supports, the size and structure of the string rail, the depth of pilings and many other factors are determined throughout the design and engineering process and are dependent on geographic conditions, mine capacity, port capacity, stockpile availability, system length and carrying capacity, and the estimated life of production. STS intends to build the demonstration facility to be indicative of general conditions so the operation of the system can easily be extrapolated to many different specific site conditions and requirements.



Variety of string rails for different loads and conditions

3.2 Background to the optimised transport system

Dr Yunitskiy's optimization of the transportation systems was developed in his work in the application of the principles of a widely used set of tools and principles known as TRIZ ("The theory of solving inventor's problems") developed in 1946 by Soviet engineer Genrich Altshuller.

TRIZ is today a series of algorithms, tools and principles that are used by many companies to deliver innovative new products and processes. It is often used in conjunction with programs such as Six Sigma™. Companies reported to be using TRIZ in their research and development include Boeing, Procter & Gamble, BAE Systems, Ford, Samsung and Philips Semiconductors.

Renowned TRIZ author Professor Michael A Orloff, a disciple of Altshuller and the world's leading authority on TRIZ counts Dr. Yunitskiy's STU technology is one of the greatest inventions in technical evolution⁵. His expert opinion on the technical feasibility and efficiency of String Transport Unitskiy technology is well documented and included in a number of his books. He has also evaluated Dr. Yunitskiy's other revolutionary system from where String Transport was originally conceived.

As a distinguished member of the USSR Federation of Cosmonautics his scientific monograph on Rocketless Launching of objects into Space. Earned him an invitation to become a Prominent member of the New York Academy of Sciences.

Throughout its history, the Academy's membership has featured leaders in science, business, academia, and government, including U.S. Presidents Jefferson and Monroe, Thomas Edison, Louis Pasteur, Charles Darwin, Margaret Mead, and Albert Einstein. Today, the NYAS President's Council includes 26 Nobel Laureates as well as CEOs, philanthropists, and leaders of national science funding agencies. Dr. Michael A. Orloff's Evaluation of STU technology, its technical feasibility and efficiency and his authored account of STU technology's place in the historical development of transportation are included in Appendix 5.

⁵ Dr. Michael A. Orloff's Evaluation of STU technology, its technical feasibility and efficiency and his authored account of STU technology's place in the historical development of transportation are included in Appendix 5.

3. STRING RAIL AS A TRANSPORT SYSTEM

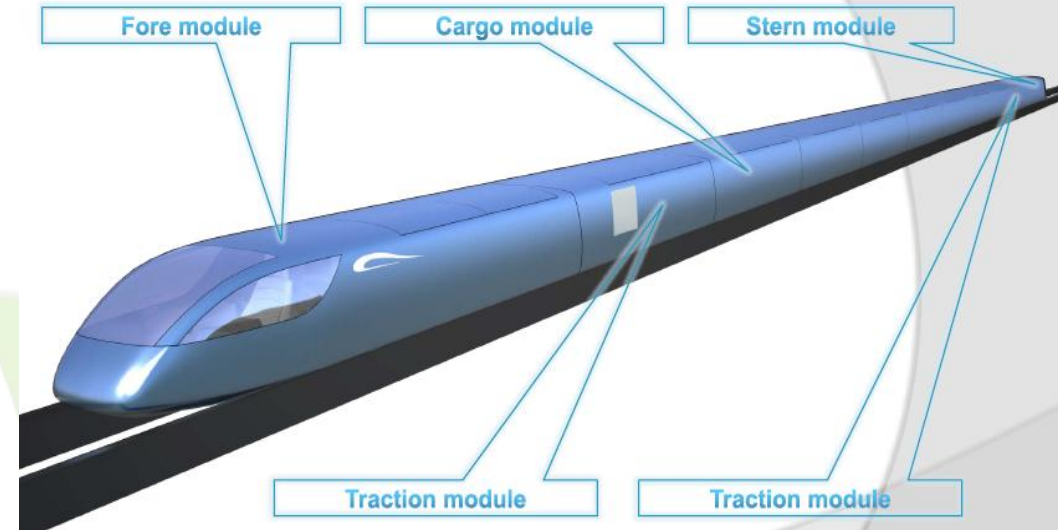
3.3 Progressive Development of the String Transport System

Dr Yunitskiy began his works on string rail optimisation in 1977 with the most prolific and significant results being achieved during the period from 1988. This resulted in the development of over 100 inventions that were recorded, demonstrated and protected through a series of published monographs, reports and articles and currently stands at 43 granted patents.

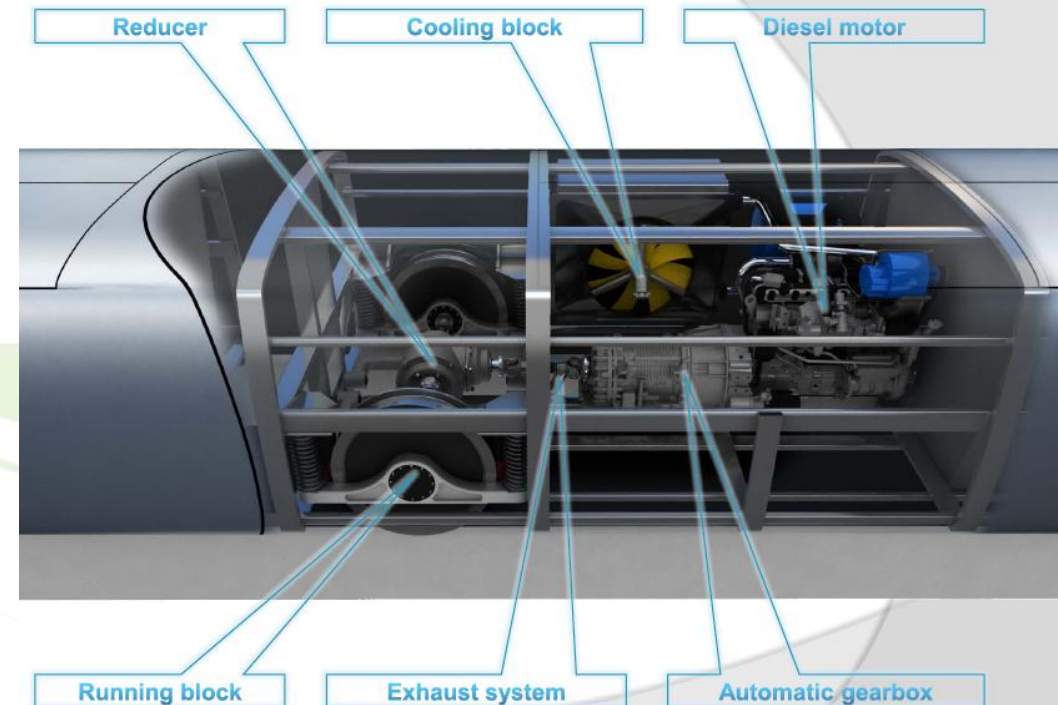
These patents⁶ comprise part of the intellectual property and the know-how in the creation of string rail, transport systems that have been vested into and exclusively licensed to STS Limited. Some of the individual components, and a representation of how an freight and mining haulage string transport system could look like are shown in the following drawings. See appendix 1 for chronological list of patented development over the years.

3.4 Design and Engineering Development

A commercial string transport installation was to be constructed in Khanty-Mansiysk region prior to the Global Financial Crisis hitting the oil rich region. Oil prices dropped from \$140 per barrel highs to levels that stopped the second phase of the project. The Design and Engineering Phase Contracts were awarded and considerable works were undertaken by STU in the design development, technical specifications, engineering works and technical documentation⁷, however, the project for a String Transport passenger line lies dormant awaiting additional funding that realistically, may never arrive. It was a very difficult position for STU, after so many years of working through and gaining technical feasibility from the Academician Solomenko's Institute for Problems of Transportation with The Russian Academy of Sciences.



Designs are based on current STU engineering drawings.



⁶ See appendix 1 for chronological list of patented development over the years.

⁷ The actual categories of technical work undertaken see section 4.4

3. STRING RAIL AS A TRANSPORT SYSTEM

However out of every adversity lies the seed of an equal or greater benefit!

The benefit for STS Limited is that STU are now commencing the same process of Design and Engineering development for a mining and freight system suitable to technical conditions in Australia. It is scheduled that by April 2011 STS will have a complete set of technical documents ready for the construction of the demonstration track. This is a component of what the first two rounds of the STS Limited capital raising will be invested in.

Scale Model Testing and Feasibility Studies



Scale model testing has been extensively undertaken. In particular two United Nations HABITAT⁸ funded projects provided in 1998 and 2002⁹, and led by Dr. Anatoly Yunitskiy, have contributed significantly to the development of the system applications.

Project 1: FS-RUS-98-S01 *“Sustainable Development of Human Settlements and Improvement of their Communication Infrastructure Through the use of a String Transportation System”*

Project 2: FS-RUS-02-S03 *“Provision of Sustainable Development of Human Settlements and Urban Environment Protection Through the use of a String Transportation System”*

The grants and test work provided for among other aspects

- A study of the population and transport requirements throughout Russia and the economic feasibility of the implementation and use of a String Transport System in certain regions

- The design, manufacture, and extensive testing of 1:15 scale electrically powered passenger transport vehicles and 1:10 scale electrically powered freight units.
- The design, manufacture, erection and extensive testing of a physical 1:10 scale model of a string rail track including rails, anchors and supports.
- A costing and economic feasibility study of a string transport system of various lengths and configurations, including construction and transport logistics and operations.

Full Scale (Segment) Demonstration Line

The UN HABITAT projects were subsequently followed by construction of a full scale (short segment) demonstration track funded by the Governor of Krasnoyarsk region in the city of Ozery.

This provided for the construction of a 150 metre segment of string rail track, rising from a ground level anchor support to a 15m High anchor support and its testing to prove the full scale performance of the technology. In particular load and incline testing was undertaken with a 12.5 ton truck driving at an incline of 10%. Video footage of this testing available at www.stringtransport.com

In summary, the United Nations HABITAT projects have allowed significant development and testing of the strength and durability, ease and consideration of manufacturing and assembly, and the design and erection of the infrastructure required for string rail transport.

⁸ *The UN HABITAT*, "The United Nations Human Settlements Programme" is the United Nations agency for human settlements. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all.

⁹ Details of these grants and a report are available at www.assob.com.au/sts or directly from the Company.

3. STRING RAIL AS A TRANSPORT SYSTEM



Construction of full scale segment of string rail track



Testing of full scale segment of string rail track

3.5 Benefits of String Rail Transport

This rail comprises tensioned high strength steel wires encapsulated inside a robust steel body and surrounded by a concrete filling. Not only are conventional materials used, keeping costs low, but the design produces a beam of high strength, low deflection under load, and low maintenance requirement.

This means that the string rail uses around 85-90% less material than a conventional rail¹⁰ for the same load performance – reducing both direct material costs and indirect costs such as that in the time and complexity of construction.

Additionally, the rail is incredibly resistant to wear and tear and the effects of heat and cold meaning that the system has a very long (50+ year) lifespan and low ongoing maintenance requirements.

Further, low track weight (allowing elevation of the track for its entire length if needed) and low rolling resistance (also an important aspect of the rolling stock design) ensures low energy operation and a minimal environmental impact. A summary of some of these design features, and how they translate into capital expenditure, project construction and operational cost advantages are shown in the following table.



High speed bulk commodities haulage train (Cheaper, lighter, stronger!)

¹⁰ Appendix 2 for comparison of steel used in 10 ton load over 50m span

3. STRING RAIL AS A TRANSPORT SYSTEM

Design Aspect	Benefit	Advantage over conventional rail and road haulage
Flat rail / steel wheel interface	<p>Low rolling resistance</p> <p>Increased operational speed possible</p> <p>No deterioration of track under each load</p> <p>more resistant to wear and tear</p>	<p>Smaller drives possible</p> <p>Greater selection of drives possible</p> <p>Highly energy efficient</p> <p>Low fuel consumption</p> <p>Low emissions</p> <p>much reduced maintenance requirement</p>
Pre-tensioned string systems	<p>streight and redundancy</p> <p>Rails don't warp or kink</p> <p>Less deflection of rail track</p>	<p>high safety rating, longer lifespan</p> <p>train speed can be increased</p> <p>Lighter construction</p> <p>heavier loads</p> <p>much reduced maintenance requirement</p>
Encapsulation of tensioned strings	<p>protection of system from mechanical damage</p> <p>protection from natural forces and corrosion</p>	<p>high safety rating</p> <p>much reduced maintenance requirement</p> <p>longer life</p>
Multifunction rail design	<p>light construction</p> <p>no sleepers, ballast, embankment</p>	<p>low cpaital / material / construction costs</p> <p>can be elevated</p>
Can be elevated	<p>can cross rough terrain</p> <p>minimal earthworks</p> <p>minimal environmental impact/footprint</p> <p>less interaction with humans and animals</p>	<p>can be used in more rugged places</p> <p>lower cost, faster construction, lower environment damage</p> <p>shorter approvals process expected</p> <p>safer</p>
Use of conventional materials	<p>keeps costs low</p> <p>low leadtimes on equipment and material</p>	<p>quicker to supply and deliver material and equipment</p> <p>less tied up working capital</p> <p>low cost components keep costs as low as possible</p>
Aerodynamic rolling stock design	<p>Low drag</p>	<p>higher speeds possible at reduced energy consumption</p>
Unit design flexibility	<p>once installed system can be easily optimised</p> <p>at all production levels by adjusting the cargo module size, speed of transport, and number of transport units in operation.</p>	<p>Can be scaled up as required in an optimal way as production increases</p> <p>System is suited to new projects with a phased period of increasing production</p>

4. BUSINESS AND MARKETING STRATEGY

4.1 Overview

When thinking of mining companies most would be aware of the major players, however, there are over 600 listed mining companies on the ASX. Mining itself is an inherently risky business and rightfully, the rewards if they do come are also very high. Fortescue Metals Group started out as a 2 cent a share business, at their height they were over \$13, they started with big dreams and a past. Whilst Andrew Forrest held the title of Australia's richest person at one stage he is also remembered for another company, Anaconda. In mining things do not always work out.

So it is not lightly that you should consider investing in mining companies or the very ones that intend to service them like String Transport Systems Limited. We might make note, however, that in the gold rush of the late 19th century it was rarely the miners that made steady returns. It was the pick, shovel, pan and donkey owners whose services were always in demand. STS is positioned much better than to provide transport services with donkeys¹¹.

Having highlighted the inherent risks just what size of a potential business are we talking about and when is that likely if at all to occur. Strategically STS will require equity and debt funding amongst other potential funds such as government grants for key management roles that are required above and beyond our skills mostly in the area of a chief financial officer. Commercialisation Australia does have these types of grants available for key management and this avenue will be pursued after listing with ASSOB.

Should STS successfully build and win a haulage contract there will be many variables such as haulage amount and the distance to port which affects what contracts are worth. As an illustrative example only, of what haulage contracts can be worth, recently Gindalbie Metals has signed a long-term agreement with QR's national bulk freight business to haul an initial 11 million tones of magnetite concentrate and direct shipping ore a year from its Mid-West iron ore mine to Geraldton Port. QR Freight, which owns WA-based Australian Railroad Group, has

signed a heads of agreement that is expected to lead to a 10-year rail haulage contract, initially worth an estimated \$130 million a year.

<http://au.news.yahoo.com/thewest/business/a/-/business/7049204/gindalbie-secures-ore-haulage-deal-with-qr/>

A commercial string rail system is expected to provide significant capital and operational cost savings compared to conventional rail haulage. This would position STS as a highly competitive provider of haulage services in large, growing, and lucrative haulage market. The demonstration facility will be used to demonstrate the cost effective and sustainable nature of string rail technology to the market positioning STS to successfully tender for highly profitable haulage contracts.

¹¹ A little known fact that Alfred Nobel the founder of the Nobel Prize, build world's first pipeline to transport oil in the Caucasus which until then was transported by donkeys... This enabled him to gain control of the entire industry and become one of the richest men of his time consequently.

4. BUSINESS AND MARKETING STRATEGY

Potential infrastructure projects that STS can tender for will strongly depend on the timing. It is important for STS to engage with potential mining clients at the right time of a project. This is expected to be typically 18 - 36 months prior to a project completion date / start of operations.

STS plan to have a demonstration line completed by the end of 2012 and so mine projects scheduled for completion in 2013-2015 are STS's initial targets for commercially operational systems. That should also match the stated port projects timelines on the East and West coasts. New Port or Port Expansion projects are able to identify which companies will take up port capacity and therefore will also require haulage to port.

Timing is Everything

Typically the planning process for mines includes the following stages of review and assessment.

In order for STS to meet its objectives to tender for haulage services, it is vital to meet the mine owners and project management teams during the scoping study phase of a mine's development. At this point in a mine's development, cost factors are most sensitive to a decision to proceed into prefeasibility or to halt the development.

String rail, with an emphasis on providing cost effective transport options, should find these projects that are at the scoping stage to be an interested and attractive market. This stage also begins to assess the environmental impacts of a project and key advantages of a string rail system such as lower land usage and disruption should be a candidate in any assessment.

Stage	Project	Activity
1	Exploration	Selection of region and exploration methods around identified high value areas, targets and geological or geophysical anomalies
2	Defined Exploration project	A program to delineate size and grade of the identified resource
3	Scoping Study	Determining economic potential and key commercial drivers +/- 30% expected accuracy A mix of inferred and indicated resources and reserves Identification of project stoppers - incl infrastructure, services, environmental, legislative aspects
4	Prefeasibility	Work to define key risks with the project, economic and project based +/- 20 - 25% expected accuracy Initial engineering and design studies initiated Project scope is narrowed and optimised on cost and yield / recovery estimates
5	Defined Feasibility or Bankable Feasibility	A comprehensive view is formed on commercial viability of the project Bankable feasibility study includes financing arrangements that can be used Commercial arrangements including offtake and pricing are provided +/- 10-15% accuracy expected Process includes arranging tenders, contracts, guarantees and warranties Options are clearly defined and costs on important items such as transport, key infrastructure and ancillary items Preparation of a mine operations plan including human resources Legal structuring and other arrangements are provided

4. BUSINESS AND MARKETING STRATEGY

4.2 Strategic Alliance – Promet Engineers Pty Ltd

To facilitate this market access and representation to the mining owners, STS has selected Promet Engineers Pty Ltd. Operating from Perth, Australia and Cape Town, South Africa, Promet Engineers provides project management, project development and feasibility study work, process plant design, engineering services and metallurgical consultancy services to minerals and metals industry clients.



Promet's partial clients list

Promet have worked with many of the iron ore miners in planning and building their mining operations and in March 2010 Promet and String Transport Systems Limited signed a legally binding, Memorandum of Understanding to build bulk haulage networks using String Transport Technology. The MOU sees STS and Promet work together to prepare proposals for string rail haulage systems and to subsequently construct a system in the event that the proposal is successful.

Several potential projects have been identified by Promet as suitable candidates for alternative transport infrastructure and Promet and STS are working together to prepare proposals for these projects. STS has already entered into its first confidentiality agreement, with an ASX listed mining group.

This to propose the parameters of a potential network that would serve 3 of its current exploration tenements in the Pilbara iron ore region of Western Australia.

4.3 Port Expansion and New Port Projects

There are two key iron ore port developments where STS believes its string rail technology will find a high level of client interest.

Mt. Anketell

Strong demand from China could see Western Australia's iron ore exports almost double from the already "massive production" of about 380 million tonnes a year to "somewhere in the range of 600 to 700 million tonnes"¹² by 2015. The new port, at Anketell, part of this expansion, would be the fourth in the Pilbara and will cost "well in excess of \$1 billion" to build.

¹² All quotes from Western Australian Premier Mr. Barnett

4. BUSINESS AND MARKETING STRATEGY

North West Iron Ore Alliance Port Developments

The North West Iron Ore Alliance, a group of mid-tier miners including Atlas Iron Ltd, Brockman Resources Ltd and FerrAus Ltd, also want to develop a \$2.1 billion port in the region, largely allowing them to avoid needing to use BHP Billiton Ltd and Rio Tinto Ltd infrastructure. Such a 50 million tonnes per annum port development at Port Hedland would be capable of meeting the shipping needs of its member companies and the Alliance said in a statement in late April that the development could be operational during the second half of 2013.

STS' intends to be ready to provide its technology and transport services to miners wanting to use this new Western Australian iron ore export port capacity. The completion of STS's demonstration track and facility in 2012 would be well timed to for this expansion.

Potential Further Projects

Bulk haulage of thermal and coking coal to east coast Australian ports is also a high potential market for STS given the environmental approval complications and high cost of new rail infrastructure projects in the region. Further work will be undertaken during Phase 1 to further identify key market segments and target clients for STS rail infrastructure. Port expansion projects have been identified in Northern Queensland.

4.4 Phase 1: Design and Engineering of a Demonstration track

A comprehensive plan has been developed for Phase 1 of STS's business strategy. Utilising technology, designs and "know how" provided by STU, STS will undertake the detailed design and engineering of a complete full scale bulk haulage system and rolling stock adapted to Australian conditions and scalable haulage requirements.

Typical project design documentation to be produced at the conclusion of Phase 1

1. Technical specifications and design documentation for loading and unloading facilities
2. Technical specifications and design documentation for depot
3. Technical specifications and design documentation for control and signalling systems
4. Technical specifications and design documentation for auxiliary equipment

5. Technical specifications and design documentation for testing equipment
6. Technical specifications and design documentation for progressive assembly equipment
7. Technical specifications and design documentation for string rail track structure, including:
 - Cross sectional profile of string rail
 - Static analysis
 - Dynamic analysis
 - Calculations of loads
 - Defining of loads in the elements of track structure
 - Calculations of durability and development of testing programme
 - Calculations of specified materials and their corrosion protection
 - Finite element analysis of various loads and their combinations within the range of identified operational conditions
 - Finite element analysis of breaking stress of tensioned elements
 - Finite element analysis of catenaries under the designed load
 - Finite element analysis of the system and its elements under extreme loads
8. Technical specifications and design documentation for anchor and intermediate supports, including:
 - Architecture
 - Structural calculations
 - Finite element analysis of deformations under the designed load
 - Finite element analysis of deformations under the extreme loads
 - Construction technology
 - Construction equipment
9. Technical specifications and design documentation for transportation modules, including:
 - Calculations of traction and electrical requirements
 - Modules architecture
 - Calculations of aerodynamic resistance
 - Calculations of body rigidity
 - Calculations of wheel-rail interface geometry
 - Calculations of stability under variety of loads and their combinations
 - Technical specifications and design documentation for all units and components including suppliers list.

4. BUSINESS AND MARKETING STRATEGY

STU LLC has won numerous awards for innovation, engineering and design excellence and is being contracted by STS to create the necessary design and engineering works under this commercialisation plan.

The design, engineering and technical work will provide a complete set of production documentation, and the project will then be ready to move into "Phase 2" being construction.

Phase 1 of the project uses funds of \$5 million raised with this Offer to design and engineer, to a ready to build state, a full scale demonstration track in Australia, at a location to be determined.

Phase 2 of the project anticipates the construction of this demonstration track and facility at a further anticipated cost of approximately \$30 million. Funding arrangements for Phase 2 of the project will be put in place during the Project's Phase 1 activity.

While final designs are preliminary this demonstration track is expected to comprise:

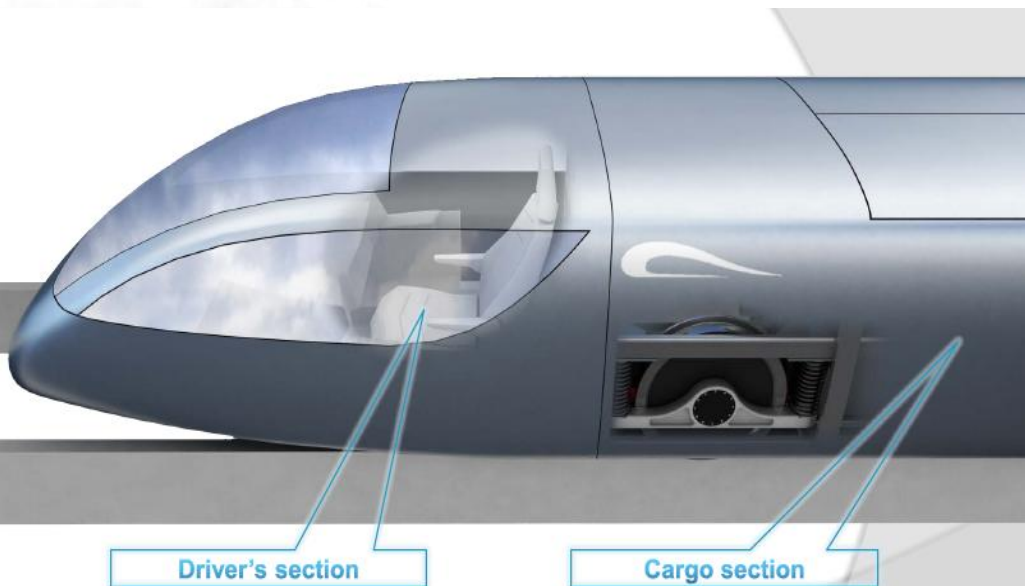
- a 10 km string rail loop
- loading and unloading facilities
- an STS built locomotive and rolling stock, and
- facilities for complete testing of the infrastructure and transport systems
- including the development and testing of control and logistics systems.

The demonstration line will be designed to be capable of transporting 200 tonne bulk commodity cargo modules at operational speeds of more than 100 km/hr.

5. FINANCIAL PROJECTIONS

The Directors have considered the matters set out in ASIC Regulatory Guide 170: Prospective Financial Information and believe that they do not have a reasonable basis to forecast future earnings because the operations of the Company are inherently uncertain.

Any forecast or projection would necessarily contain such a broad range of potential outcomes and possibilities that it would be unreliable, and for that reason, the Directors have decided not to include any financial projections or forecasts.



6. BOARD OF DIRECTORS AND MANAGEMENT

STS's Board and Management Team comprise:

Dr. Anatoly Yunitskiy PhD – Managing Director

Dr. Yunitskiy's experience in managing transport related projects has been proven at the highest international levels. He project managed 2 United Nations HABITAT projects for Sustainable Development of Human Settlements with String Transport Unitsky. Dr. Yunitskiy graduated as Bachelor of Engineering of Transport Infrastructure, he also holds Bachelor of Law in Patent Law and IP protection and he is a member (Academician) of the Russian Academy of Natural Sciences and is also a member of the USSR Federation of Cosmonautics. Dr. Yunitskiy has an honorary award the "Knight of Science and Art" by The Russian Academy Of Sciences. He is a prolific Author of more than 100 publications in scientific and popular scientific journals and 5 scientific monographs. Authored 30 inventions in construction, machine building, electronics and chemical industries, which have been implemented in a number of European countries.

Author of 100 inventions related to the string transport system and currently is the author and holder of 43 patents which have been exclusively licensed to String Transport Systems Limited.

During past 25 years Dr. Yunitskiy held number of top management positions in a number of government construction, mechanical and scientific institutions. He has practical experience in construction of bridges and other complex facilities. As the General Director of STU LLC and from the culmination of his decades of dedication to String Transport design and engineering he is the natural leader of the team for the development of an Australian mining haulage system with String Transport Systems Limited.

Dr. Yunitskiy is a true visionary and it is with honour that we have him as the Managing Director throughout these vital early design and construction phases.

Victor Uzlov – MBA – Operations Director

Victor has been instrumental in the decision process to take STU LLC forward from the constraints faced in Russia and which can best be summed up as regulatory and bureaucratic hurdles. Having received a long promised approval from the Moscow Institute of Engineering in Transportation, it was decided that this would best be proven in an environment that capitalizes on all previous STU design and incorporates that into a specific haulage system for freight and mining. That made Australia, a top 5 producer of most of the major mineral commodities and with significant transport constraints, an obvious choice for commercialization.

Mr. Uzlov holds MBA from Higher School of Management with the Government of Russian Federation (2007). He had also graduated with distinction from the Academy of Economics with the Government of Russian Federation (2004). Originally Victor graduated with distinction from the Academy of Civil Aviation as the pilot-engineer (1994).

Before joining STS Mr. Uzlov honed his management and business skills in variety of private enterprises that he created and guided to achieve their maximum capitalization. He started as a sales manager in 1995 and grown to a Vice-president of Mirax Group (The corporation with assets of USD \$ 2.0 billion). Mr. Uzlov was in charge of project management for a variety of multi million construction projects with more than 1000 employees reporting directly to him.

6. BOARD OF DIRECTORS AND MANAGEMENT

Vladimir Romachko – CEO / Chair of Directors

Vladimir is the key to STU LLC being able to effectively implement its design and engineering work in Australia. He is a Russian born Australian citizen who emigrated at the age of 20. Having served in a military academy in Russia, he turned to business in Australia and has built a network of associates in his former homeland that own various technology businesses. Dr. Yunitskiy's STU LLC was one of these. Gaining a high level of understanding of String Transport technologies and knowing the lengthy delays of regulatory processes in Russia, Vladimir suggested to STU LLC that they should consider moving into the Australian mining industry by adapting their freight system.

Vladimir has been instrumental in ensuring the company has reached the stage of investor ready status, his knowledge and translation of the Intellectual Property and the essentials of STU and how that has been conveyed to the industry participants has been vital in STS being broadly accepted. His Bi-Lingual communication skills are vital in ensuring the on target development, construction and commissioning of the demonstration line project.

Michael McBride – Business Development Director / Company Secretary

Michael is an Australian with a background in international marketing, media and business development working throughout much of South East Asia. Having lived and worked in India and Thailand for most of the last decade he was the former VP Asia Pacific Sales at the ICT China Group and most recently Business Development manager at B100 Systems, conducting Renewable Energy project delegations to Agricultural Ministries in Thailand, Cambodia and Vietnam pursuing farming partnership co-operative agreements in those countries.

Michael is also acting as the Company Secretary ensuring the company remains compliant with the Corporations Act, governance and shareholder communications. He has worked in corporate marketing communications and information services on the ASX IPO's of Commonwealth Bank, Woolworth's,

N.R.M.A and AMP demutualisation's. His energy, enthusiasm and passion for String Transport Systems are important as the company's public officer and spokesperson.

Shaneel Mudaliar LLB, LLM, Legal Counsel

Shaneel holds a Master of Laws degree in Corporate and Commercial Law from UNSW and a Bachelor of Laws degree from the University of South Pacific. Shaneel is the principal of the law firm Seed Legal Pty Ltd, which specializes in advising start-ups and small / medium technology and financial services businesses in Australia. Shaneel has worked on various corporate and commercial legal projects whilst working in-house for a general insurer and specialist law firms. Some of his projects dealt with acting for ASX listed biotechnology companies, Telco's, financial services providers and technology based companies. Shaneel is guiding String Transport Systems Limited through the process of full disclosure documentation and preparation for listing on a suitable exchange.

7. CORPORATE GOVERNANCE / CONTINUOUS DISCLOSURE

The Company has adopted sound practices of corporate governance. A process of continuous disclosure has been adopted relevant to keeping Directors, management, Shareholders and potential investors informed. In all the Company does, it is cognisant of subsequent requirements for due diligence in the event of a future merger, trade sale, takeover or listing.

Investors in String Transport Systems Limited are invited to undertake their own due diligence of the Company, its management and the Company's products or services, subject to signing a Confidentiality Agreement. Enquiries should be made to the Company directly.

8. FINANCIAL REPORTING TO SHAREHOLDERS

String Transport Systems Limited will ensure that in accordance with its duties under the Act (which Act), quarterly financial information will be made readily available to the Board and its Shareholders. The Company will produce an annual investor report incorporating Profit & Loss, Balance sheet, Cash Flow and Operations Report in accordance with International Financial Reporting Standards (IFRS). The Company's quarterly report will also be made available on the Company's 'Issuer Page' of the ASSOB website at www.assob.com.au/sts

9. COMPANY INCORPORATION

String Transport Systems Limited was incorporated as an unlisted public company on 18th March 2010

10. PURPOSE OF CAPITAL RAISING

The Company is seeking to raise an amount of \$5 Million through an issue of Ordinary Shares for the principal purpose of Phase 1 pre-construction design and engineering of a string rail demonstration facility. The capital raising is being undertaken through this Information Memorandum in accordance with the capital raising provisions pursuant to section 708 of the Act. When all of the Shares on offer are taken up, the \$5 Million would represent an equity stake in the Company of approximately 14.93%.

11. MINIMUM SUBSCRIPTION REQUIREMENT

No Shares will be issued pursuant to this Offer Document until Minimum Subscription has been reached. The minimum amount sufficient to commence the implementation of the immediate business planning objectives of the Company pursuant to this Offer is \$120,000. This will allow the business to

Begin the technical assessment and business planning phases of the development
Prepare for further capital raising through the issue of a prospectus

Preparation of a Prospectus

The Company plans to use some of the proceeds of this capital raising to prepare a prospectus. A prospectus will assist the Company in raising funds where required for implementation of the business plan beyond the capacity of this Offering and where no further concessions or sophisticated or professional investors are remaining,

11. MINIMUM SUBSCRIPTION REQUIREMENT

Minimum Subscription

Once Minimum Subscription has been reached, Shares allotted pursuant to this Offer Document will be issued and monies held in Trust will be allocated and released for the benefit of the Company. It will take up to ten (10) business days to process Share Application Forms ("Applications") and Application Monies through the Trust Account and thereafter the Company will issue certificates to Shareholders which set out the number of Shares issued to each Shareholder pursuant to this Offer Document.

In the event the Minimum Subscription amount is not met within four (4) months of the Opening Date, then any monies so far subscribed will be refunded to Investors in full and without interest and this offer will be withdrawn from the Board, pending further action from the Company.

Offer Document will offer, or may be construed as offering advice to any potential investor in String Transport Systems Limited.

Should the Company elect, at its sole discretion, to offer Securities for a Round 3 to remaining concessions covered by s708(1) of the Act or to any sophisticated, professional or other excluded investors pursuant to section 708 of the Act any such Offer may be made through a Supplementary Offer Document or an Investment Memorandum. Should there not be any sophisticated, professional investors or remaining concessions, an additional Round/s may be made under full disclosure.

Please note that at any stage of the capital raising process, the pricing of the securities provides investors with a guide only and the price paid for securities will always be a matter for negotiation between the parties. The Company makes no representation about the underlying value of securities on offer. Prospective investors must make their own assessment about whether the price of the securities on offer represents fair value. Prospective investors must make their own assessment about whether the price of the securities on offer represents fair value.

12. THE OFFER

Three rounds of funding have been anticipated in this Offer.

The Company will offer for Phase 1, for sale a total of 46,666,667 (Forty Six Million Six Hundred and Sixty Six Thousand Six Hundred and Sixty Seven) Ordinary Shares at an issue price of \$0.04 cents in Round 1, \$0.06 cents in Round 2 and \$0.12 cents in Round 3 which, when sold is intended to provide the required \$5,000,000.

The raising is expected to provide investors with an approximate amount of 14.93% equity in the Company. However, before making any investment, investors are advised to take their own independent accounting, taxation, legal and any other advice they or their circumstances may require in considering an investment in String Transport Systems Limited. No person mentioned in this

13. USE OF PROCEEDS

The capital raised through this Offer will be used by String Transport Systems Limited to fund the growth of the Company in accordance with the following use of funds schedule. The schedule is an indication of the performance milestones expected to be met by the Company in this Offer. The investor money held in trust will be released to the Company upon reaching minimum subscription levels. The individual amounts in the table may be subject to variation.

13. USE OF PROCEEDS

Round 1 Funding		
	1 st Stage Technical Study Commencement	70,000
	Costs of prospectus preparation	70,000
	Working Capital for Business	20,000
	Lease of Premises, Associated Costs	15,000
	Cost of Raising Funds	25,000
Total		\$200,000
Round 2 Funding		
	2nd Stage Technical Study Commencement	100,000
	Working Capital for Business	50,000
	Marketing and Prospectus Promotion	20,000
	Consultants and Advisers	12,000
	Cost of Raising Funds	18,000
Total		\$200,000
Round 3 Funding		
	Complete Design and Technical Work, RTB*	3,100,000
	Working Capital	150,000
	Advisers, Consultants, Legal's, Tax etc	30,000
	Listing Process on a Suitable Exchange (tbc)	900,000
	Cost of Raising Funds	420,000
Total		\$4,600,000
TOTAL FUNDS RAISED FROM Round1, Round 2 and Round 3		\$5,000,000

*STS holds a reasonable expectation that dependent on suitable location and results from its scoping studies that the design, technical and engineering works will be fully documented and Ready-To-Build. Costs may be revised upwards due to unforeseeable circumstance prior to the final results of the scoping study.

14. HOW TO APPLY FOR SHARES

An Application to subscribe for Shares pursuant to this Offer may not legally be included in this Offer Document and any interested investors are to request an Application from the person whose name and contact details appear at the end of this Offer Document at Section 33.

The Offer made pursuant to this Offer Document is made only to the addressee of the Offer and only the addressee may complete the Application and subscribe for the Shares offered pursuant to this Offer. To that extent, neither the Offer Document nor the Application may be handed to any member of the public.

Applications should be for an average minimum parcel of 500,000 shares or \$20,000 in Round 1 and 333,333 shares or \$20,000 for Round 2. A completed Application must be accompanied by a single payment in the full amount as per instructions on the Application form.

For Overseas Investors, a completed Application must be accompanied by a telegraphic transfer (TT) receipt or electronic funds transfer (EFT) receipt, made payable to the Trust Account nominated on the Application. All funds sent from overseas, when converted to Australian dollars, must be the same Australian dollar amount inserted in the Application – clear of bank fees. Funds must arrive as a single deposit for the full amount with the three letter ASSOB Code reference, plus the investor name and date of transfer.

14. HOW TO APPLY FOR SHARES

Application Monies for Shares offered pursuant to this Offer Document will be held in trust until allotment of those shares (subject to reaching the prescribed Minimum Subscription requirement).

For sophisticated investors who, pursuant to s708(8)(c) of the Act, are able to provide a certificate from a qualified accountant and for other excluded investors under s708 of the Act, the subscription amount is limited by the total number of Shares to be raised through this Offer Document.

The Directors reserve the right to accept any Application in full, accept any lesser number of Shares, or decline any Application. Applicants must not assume that the Shares they apply for, or any number of Shares, will be issued to them in response to their Application and before dealing in any Shares, Applicants must satisfy themselves as to their actual holding of Shares.

In the event any Application is rejected, in whole or in part, the relevant Application Monies will be refunded to the investor in full without interest. Where the number of Shares issued is less than the number applied for by the Applicant, the surplus Application Monies will be refunded by cheque within thirty (30) days after the Closing Date. Where no Shares are issued, Application Monies will be refunded to the investor in full by cheque within thirty (30) days of the Closing Date.

The Company will issue certificates to Shareholders once Minimum Subscription has been reached and Shares have been allotted, which sets out the number of Shares allocated to each Shareholder pursuant to this Small Scale Offering. Should there be any change to an Applicant's holdings, a new certificate will be provided upon delivery to the Company of the original certificate for cancellation.

15. OPENING AND CLOSING DATES

The Opening Date of this Small Scale Offering is 5 May 2010 at 9am ESDT and the Closing Date will be 2 May 2011 at 5pm ESDT, unless fully subscribed earlier. The above date is indicative and subject to change. String Transport Systems Limited reserves the right to change the dates and times of the Offer without notice, whether fully subscribed or not. String Transport Systems Limited also reserves the right to extend the closing date for Applications without prior notice. Prospective investors are encouraged to submit an Application for Shares as early as possible.

16. AVERAGE INVESTMENT PER INVESTOR

The average investment per investor is \$20,000 in Round 1 and \$20,000 in Round 2, which may be negotiated between the Company and the Applicant.

17. AVERAGE SHAREHOLDING PER INVESTOR

The average parcel of shares available per investor is 500,000 Ordinary Shares at \$0.04 cents in Round 1 at \$20,000 per investor, 333,333 Ordinary Shares at \$0.06 cents in Round 2 for \$20,000 per investor, and 383,333 Ordinary Shares at \$0.12 cents in Round 3 at \$46,000 per investor which may be negotiated between the Company and the Applicant.

18. LIMITED LIABILITY

In accordance with the Act, the liability of shareholders is limited to the fully paid value of the shares held. If partly paid shares are held and a call is made, the holder is liable to pay the call. An investor taking up shares in a company knows from the outset the extent of their individual liability and should seek appropriate professional advice to determine in the investment is suitable.

String Transport Systems Limited does not intend to issue any partly paid Shares.

19. OWNERSHIP STRUCTURE

The Directors, present owners and existing shareholders have invested up to 33 years in development of the technology and the systems, including considerable funds, time and effort in research, development, intellectual property, contracts, processes and systems of the business to achieve this stage of the Company's development. For this contribution they will retain 85.07% of String Transport Systems Limited from the outset.

20. DIVIDEND POLICY

The initial objective of String Transport Systems Limited is to obtain sufficient working capital to enable it to fully develop its strategic business plan. The ability of String Transport Systems Limited to pay and the amount of any dividend in the future is dependent on many factors, including its future capital and research and development requirements and the financial position generally of String Transport Systems Limited at the time. Many of the factors that affect the ability of the Company and the timing of those dividends will be outside the control of String Transport Systems Limited and its Directors. The Directors cannot give any assurance regarding payment of dividends in the future.

21. EXIT STRATEGY – AM I ABLE TO SELL MY SHARES?

Generally, an unlisted public company's shares can be traded through the company's share register (subject to any pre-emptive rights agreement or escrow restriction agreement). A shareholder may transfer by proper transfer or by an instrument in writing in any form authorised by the Act or in any other form that the directors may approve. The directors may only decline to register any transfer in circumstances where the transfer is not in a registrable form or where the Act provides or would require that the registration be refused. All share transfers and documentation relating to the transfer of shares must be documented in the company's share register and lodged at the company's registered office.

The Shares in String Transport Systems Limited are freely transferable in accordance with the provisions of the Constitution and the Act. However, as String Transport Systems Limited will not be listed on a stock exchange it is unlikely that there will be an immediate market for the Shares. To that extent, the market for ordinary shares must be considered to be illiquid and likely to remain illiquid until such time, if at all, the Company lists on a stock exchange or is taken over by a company listed on a stock exchange.

22. CREATION AND ISSUE OF FUTURE SHARES

The issue of Shares is under the control of the Directors of String Transport Systems Limited. Subject to restrictions on the allotment of Securities to Directors or their associates contained in the Act, the Directors may allot or dispose of other Shares on such terms and conditions as they see fit. To obtain a definitive assessment of rights and liabilities which attach to this Offer, Shareholders should obtain a copy of the Company's Constitution and seek their own independent legal and accounting advice.

23. OTHER COMPANY INFORMATION

a. Material Contracts

Intellectual Property

The Company entered into an IP Licensing agreement with String Transport Unitsky LLC in March 2010. The key components of this agreement are as follows:

- An exclusive license with the right to grant sub-licenses for the Term to reproduce, use and exploit the Intellectual Property, the trademarks and the Confidential Information
- On a global basis,
- On a perpetual basis, subject to any rights of early termination.
- A standard license fee is payable by the Company to STU LLC on sales of string transport systems, with this fee set as a small percentage of the net total sales.

Promet Engineers Pty Ltd ("Promet")

The Company entered into a legally binding memorandum of understanding with Promet Engineers Pty Ltd in March 2010 for the development of bulk haulage projects using STU technology. The key components of this agreement are as follows:

- Exclusive arrangement, for Australia
- Promet and STS to work together to identify appropriate projects, and jointly submit a proposal for the design, engineering, construction and operation of a bulk haulage system using the technology.

b. Employee Share Ownership Participation Scheme

The Company wishes to disclose that in the future, it may establish an Employee Share Option Plan (ESOP) in order to attract and retain key personnel. The scheme will be subject to the obligations set out in the Act.

c. Constitution – the Constitution limits the liability of the Company's Shareholders. It also contains the internal rules of the Company and defines matters such as the rights, duties and powers of directors and shareholders. In subscribing for Shares you will be bound by the Constitution of String Transport Systems Limited, a copy of which will be provided (free of charge) to any interested party upon request to the Company.

d. Website - The Company has set up a web site at www.stringtransport.com for the marketing and promotion of its products or services and is continually adding to and updating the site as the business develops.

e. Litigation - The Company is not engaged in any litigation.

f. Risk factors - Investors are invited to investigate the quality of the Company's products or services and its contractual agreements, some of which may require a Non Disclosure Agreement to be executed. The Directors are confident that the funds being sought will enable the Company to capitalise a new phase of activity.

Some of the general risks faced by the Company include the unexpected development of radical new technologies, managerial and human resource problems, unexpected litigation and general economic fluctuations. Risk reduction strategies will be implemented where possible. Prospective investors should consider whether unlisted shares are an appropriate investment and, if in any doubt, should contact their accountant, financial planner, solicitor or other professional advisor.

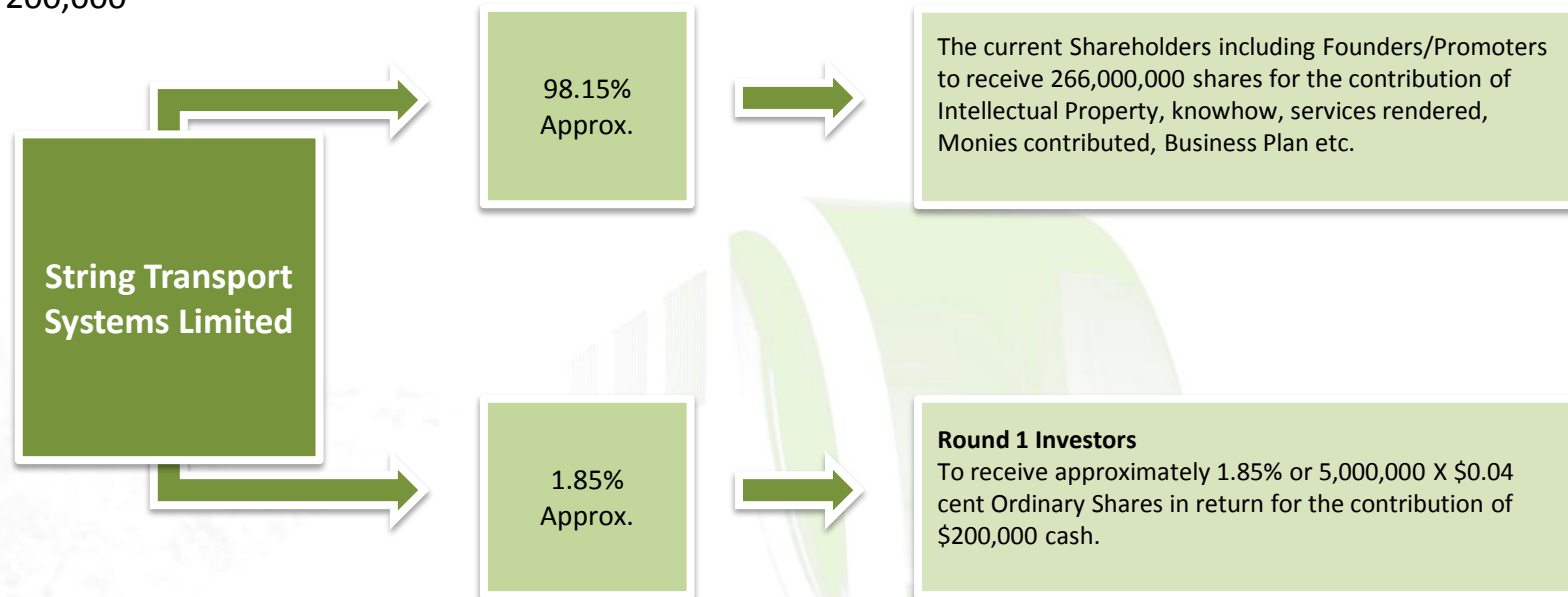
RISK	MITIGATION
Mines may be contracted to existing haulage	STS has identified numerous Greenfield opportunities for initial haulage services
No appetite for unproven system, Technology Risk	STS is constructing the demonstration of the test track & turnkey
Financial Risk	STS is looking towards project financing the first commercial system
Suitable Labour, Contractors, Workforce	STS has teamed with existing engineering project managers for necessary workforce requirements
Environmental and Regulatory Issues	STS has identified several key areas where the use of STS enhances the likelihood of project acceptance on environmental and sensitive wildlife habitat issues

There can be no guarantee that the Company will achieve its stated objectives or that any forward-looking statements will eventuate. Accordingly, an investment in the Company should be regarded as highly speculative. This information does not purport to be a comprehensive statement of all risks; an investor should seek and obtain professional advice prior to deciding whether or not to invest in String Transport Systems Limited.

25. ROUND 1 – STRATEGIC GROWTH PLAN (SGP)

String Transport Systems Limited

To raise: \$ 200,000



Share Pricing – Round 1

Ordinary Shares on Offer:	5,000,000
Pricing per share:	\$0.04
Total Proceeds to the Company:	\$200,000
Company now capitalised at	\$10,840,000

Investor Notes

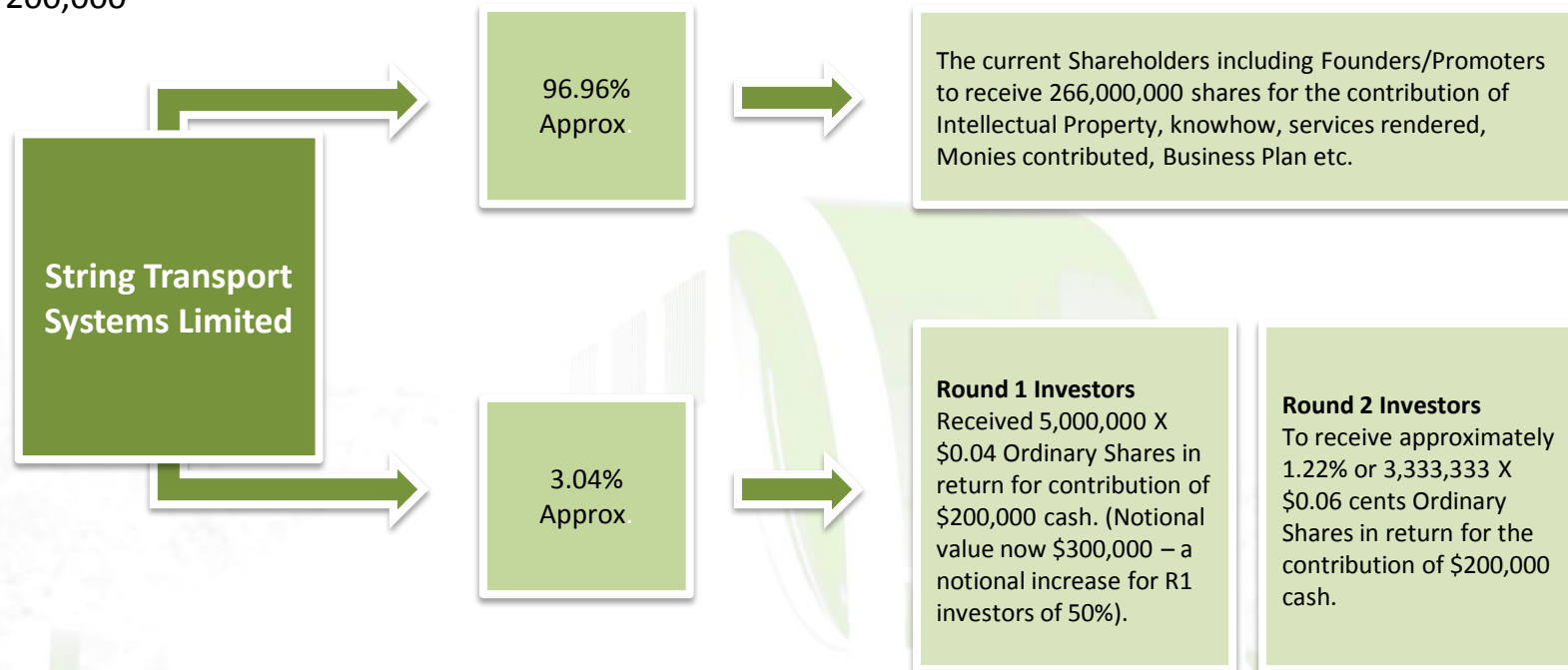
The stated capitalised value should not be construed as being a valuation of the Company. This figure is solely obtained by multiplying the quantity of Shares on issue by the current Offer price of this Round, i.e. Total Amount of Issued Capital x Share Price.

In any Round of capital raising being undertaken, the pricing of the Securities provides investors with a guide only and the price paid for Securities will always be a matter for negotiation between the parties. The Company makes no representation about the underlying value of Securities on offer. Prospective investors must make their own assessment about whether the price of the securities being offered represents fair value.

26. ROUND 2 – STRATEGIC GROWTH PLAN (SGP)

String Transport Systems Limited

To raise: \$ 200,000



Share Pricing – Round 2	
Ordinary Shares on Offer:	3,333,333
Pricing per share:	\$0.06
Total Proceeds to the Company:	\$200,000
Company now capitalized at	\$16,460,000

Investor Notes

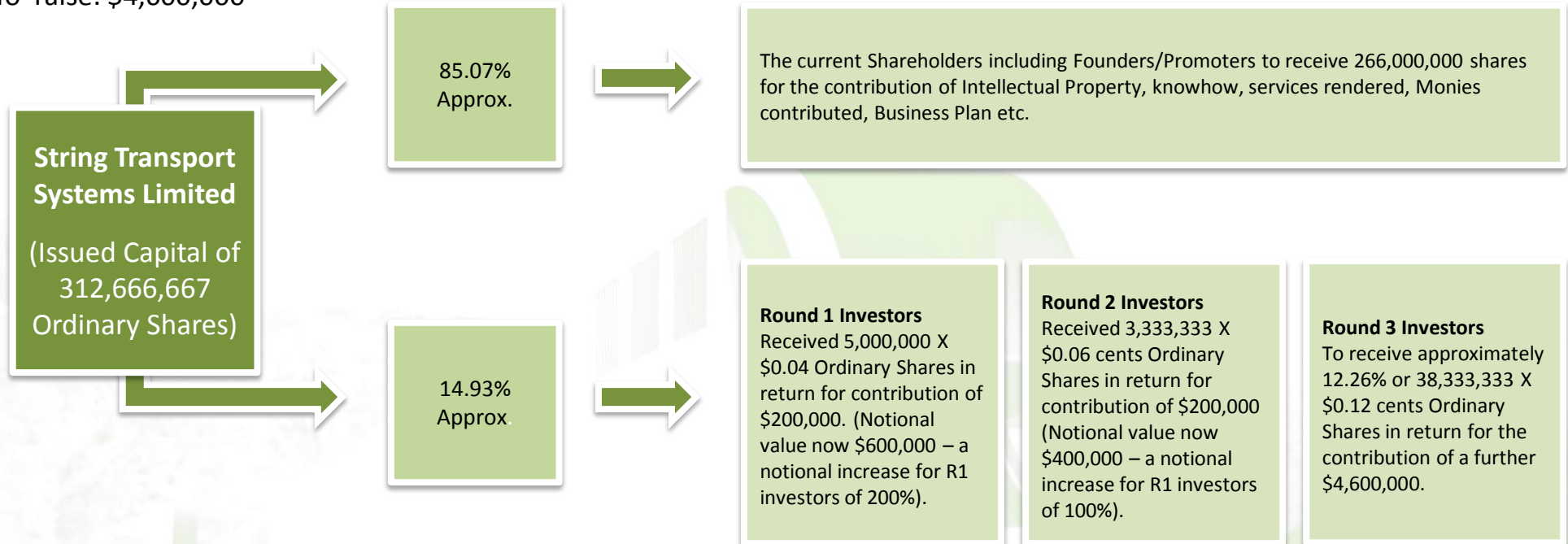
The stated capitalised value should not be construed as being a valuation of the Company. This figure is solely obtained by multiplying the quantity of Shares on issue by the current Offer price of this Round, i.e. Total Amount of Issued Capital x Share Price.

In any Round of capital raising being undertaken, the pricing of the Securities provides investors with a guide only and the price paid for Securities will always be a matter for negotiation between the parties. The Company makes no representation about the underlying value of Securities on offer. Prospective investors must make their own assessment about whether the price of the securities being offered represents fair value.

27. ROUND 3 – STRATEGIC GROWTH PLAN (SGP)

String Transport Systems Limited

To raise: \$4,600,000



Share Pricing – Round 3	
Ordinary Shares on Offer:	38,333,333
Pricing per share:	\$0.12
Total Proceeds to the Company:	\$4,600,000
Company now capitalized at	\$37,520,000

Investor Notes

The stated capitalised value should not be construed as being a valuation of the Company. This figure is solely obtained by multiplying the quantity of Shares on issue by the current Offer price of this Round, i.e. Total Amount of Issued Capital x Share Price.

In any Round of capital raising being undertaken, the pricing of the Securities provides investors with a guide only and the price paid for Securities will always be a matter for negotiation between the parties. The Company makes no representation about the underlying value of Securities on offer. Prospective investors must make their own assessment about whether the price of the securities being offered represents fair value.

28. COOLING OFF PERIOD

Please note that if an investor enters into a contract to purchase shares from the Company within five (5) business days from attending an Investor Meeting, the investor can cancel (i.e. void) the contract without penalty or forfeiture. In the event the investor exercises this right, written notice must be provided to the Company within ten (10) business days from the date of the Meeting.

29. LEGAL JURISDICTION

This Offer Document does not constitute an Offer of Securities in any jurisdiction where, or to any person to whom, it would not be lawful to issue the Offer Document or make the Offer. It is the responsibility of any Applicant outside Australia to ensure compliance with any laws relevant to their Application. Any such Applicant should consult professional advisers as to whether any government or other consents are required or whether any formalities need to be observed to enable them to apply for and be allotted any Securities. No action has been taken to register or qualify the Securities or the Offer or to otherwise permit a public Offering of the Securities on offer in any jurisdiction outside Australia.

30. GLOSSARY OF TERMS

This glossary of terms is provided to assist persons in understanding some of the expressions used in this Offer Document

\$ means Australian dollars

Applicant is used interchangeably with INVESTOR and means a person who applies for Shares in accordance with this Offer Document

Application means a valid application to subscribe for Shares offered under this Offer Document

APPLICATION MONIES means monies received from an Application in respect of an Application

ASIC means Australian Securities & Investment Commission

AUSTRALIAN SMALL SCALE OFFERINGS BOARD means the Internet-based bulletin board for small scale offerings operated by Australian Small Scale Offerings Board Limited (ABN: 109 469 383) at www.assob.com.au

Board means the board of directors of the Company duly appointed in accordance with the Company's Constitution

Class Order means the Class Order 02/273 Business Introduction or Matching Services as prescribed by ASIC

Capitalised Value means the quantity of shares on issue by the current offer price of the round

Closing Date means twelve months from the Opening Date of the Offer Document

Company means the entity as shown on the front cover of the Offer Document

Constitution means the constitution of the Company and all the amendments thereto

Corporations Act or the ACT means Corporations Act 2001(C'th) including the Corporations Regulation 2001 (C'th) as amended from time to time

Directors mean the directors of the Company

Issuer Page means the Company's profile page as displayed on the ASSOB website

30. GLOSSARY OF TERMS

Investor Meeting means a meeting between the Company and potential investors which is organised for the purpose of investing in an Offer listed with ASSOB and conducted by the Company and ASSOB or its accredited Consultant and not held at premises of any potential investor

Minimum Investment means the average minimum parcel of shares available to an investor pursuant to this Offer Document

Minimum Subscription means the minimum amount sufficient to commence the implementation of the immediate business objectives of the Company as described in this Offer Document

New ISSUE means Shares to be newly issued pursuant to this Offer Document

Offer Document means this document dated 3 May 2010 as modified or varied by a Supplementary or Replacement Offer Document made by the Company

Opening Date means the opening date of the Offer as shown on the front cover of the Offer Document

Ordinary Shares means ordinary fully paid shares in the capital of the Company

Overseas Investor is an investor that is domiciled overseas

Sophisticated and Professional Investors means those terms ascribed under Sections 708(8) and (11) of the Act

Secondary Sale Offer means a transfer of securities by individual Shareholders in the Company

Small Scale Offering means offers to issue or sell securities or scheme interests made under Section 708 of the Act 2001

31. WHO TO CONTACT

If after reading this publication you wish to undertake further investigation or receive an Application to subscribe to the Offer, please contact:

Kern Wyman
ASR Capital

Phone: 0448 443 870 Fax: 02 9494 0950

E-mail: kernwyman@asrcapital.com.au

32. DIRECTORS DECLARATION

The Directors of String Transport Systems Limited have made reasonable enquiries to ensure that there is no material statement in this Offer Document which is false or misleading. They have also made reasonable enquiries to ensure that there is no material omission from the Offer Document. The Directors report that, as of the date of signing, after due enquiry by them, they have not become aware of any circumstances that in their opinion materially affects or will materially affect the assets and liabilities, financial position, profits and losses or prospects of String Transport Systems Limited other than those set out in the Offer Document. The issue of this Offer Document was authorised by a resolution of the Directors.

DISCLAIMER

The Issuer has supplied the content (text, pictorials, diagrams and photographs) contained in this Offer Document. Australian Small Scale Offerings Board Limited ACN 109 469 383 and its related subsidiaries present the Offer Document on its website in good faith believing the content to be true, but makes no representations as to its accuracy. Prospective investors are urged to make further enquiry about this investment, as well as seek appropriate professional advice before investing.

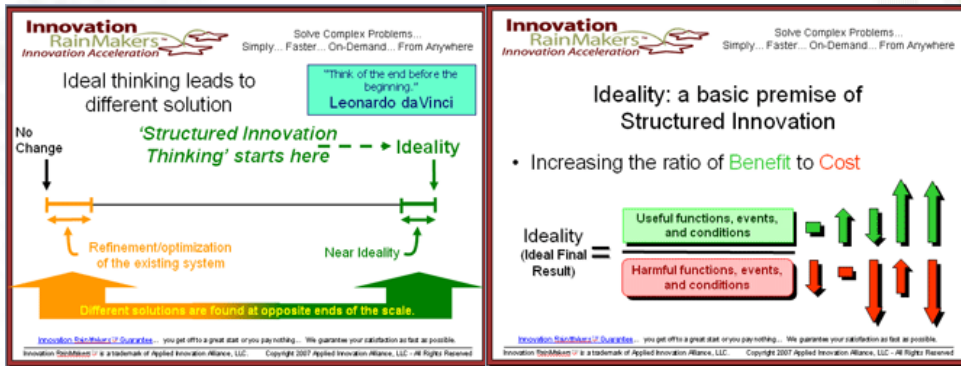
LIST OF PATENTS RELATED TO COMMERCIAL STRING RAIL SYSTEM

1. Anatoly Yunitskiy. Linear Transport System. Patent of Republic of South Africa № 95/2888, classification B 659, 1994.
2. Anatoly Yunitskiy. Rail for string transportation systems. Patent of the Russian Federation No. 45523, cl. 12-03, 1996.
3. Anatoly Yunitskiy. Transportation vehicle for string transportation systems (two alternatives). Patent of Republic of Belarus No. 220, 1996.
4. Anatoly Yunitskiy. Rail for string transportation systems (two alternatives). Patent of Republic of Belarus No. 221, 1996.
5. Anatoly Yunitskiy. Rail for string transportation systems. Patent of Republic of Kazakhstan No. 114, cl. 25-01, 1996.
6. Anatoly Yunitskiy. Rail of transportation system of Unitsky. Euro-Asian patent No. 003485, cl. E 01 B 5/08, 2001.
7. Anatoly Yunitskiy. High-speed transportation module. Euro-Asian patent No. 003490, cl. B 62 D 35/00, 2001.
8. Anatoly Yunitskiy. High-speed transportation module. Euro-Asian patent No. 003533, cl. B 62 D 35/00, 2001.
9. Anatoly Yunitskiy. High-speed transportation module. Euro-Asian patent No. 003534, cl. B 62 D 35/00, 2001.
10. Anatoly Yunitskiy. High-speed transportation module. Euro-Asian patent No. 003535, cl. B 62 D 35/00, 2001.
11. Anatoly Yunitskiy. High-speed transportation module of transportation system of Unitsky. Patent of the Russian Federation No. 2201368, cl. B 62 D 35/00, 2001.
12. Anatoly Yunitskiy. High-speed transportation module of transportation system of Unitsky. Patent of the Russian Federation No. 2201369, cl. B 62 D 35/00, 2001.
13. Anatoly Yunitskiy High-speed transportation module of transportation system of Unitsky. Patent of the Russian Federation No. 2203194, cl. B 62 D 35/00, 2001.
14. Anatoly Yunitskiy. High-speed transportation module of transportation system of Unitsky. Patent of the Russian Federation No. 203195, cl. B 62 D 35/00, 2001.
15. Anatoly Unitsky. Rail of transportation system of Unitsky, production and assembly techniques (2 inventions). Patent of the Russian Federation No. 2204637, cl. E 01 B 25/00, 2001.
16. Anatoly Yunitskiy. Rail of transportation system of Unitsky and its production technique (2 inventions). Patent of the Russian Federation No. 2204639, cl. E 01 B 25/00, 2001.
17. Anatoly Yunitskiy. Rail of transportation system of Unitsky. Patent of the Russian Federation No. 2208675, cl. E 01 B 25/00, 2001.
18. Anatoly Yunitskiy. High-speed transportation module of transportation system of Unitsky. Patent of the Russian Federation No. 2211781, cl. B 62 D 35/00, 2001.
19. Anatoly Yunitskiy. High-speed transportation module of Transportation system of Unitsky. Patent of the Russian Federation No. 2217339, cl. B 62 D 35/00, 2001.
20. Anatoly Yunitskiy. Transportation system of Unitsky (alternatives) and ways of its construction (4 inventions). Patent of the Russian Federation No. 2220249, cl. E 01 B 26/00, 2002.
21. Anatoly Yunitskiy. Transportation system of Unitsky (alternatives) and ways of its construction (3 inventions). Patent of the Russian Federation No. 2224064, cl. E 01 B 26/00, 2002.
22. Anatoly Yunitskiy. Building technique to erect high-rise buildings, structures through dipping of concrete form of span or using wall-shaft system (2 inventions). Euro-Asian patent No. 004188, cl. E 04 B 1/35, 2002.
23. Anatoly Yunitskiy. String transportation system (alternatives), production and assembly technique of a span section of string rail thread. Euro-Asian patent No. 005017, cl. E 01 B 25/24, 2003.
24. Anatoly Yunitskiy. Unitsky Transport System (alternatives) and assembly technology (4 inventions). Euro-Asian patent № 006359, cl. B 61 B 3/00, 2004.
25. Anatoly Yunitskiy. Unitsky Transport System (alternatives) and assembly technology (3 inventions). Euro-Asian patent № 006111, cl. B 61 B 3/00, 2004.
26. Anatoly Yunitskiy. Unitsky Transport System (alternatives) and assembly technology (3 inventions). Euro-Asian patent № 006112, cl. B 61 B 3/00, 2004.

APPENDIX 2 – TRIZ AND ITS APPLICATION TO STRING RAIL

Transport

TRIZ is the Theory of Inventive Problem Solving and was developed by a Soviet engineer and researcher Genrikh Altshuller and his colleagues starting in 1946. It has been evolving ever since. This work allowed Altshuller to study some 200,000 patents and lead to the development of detecting various common patterns that he saw in all successful patent applications. TRIZ has been employed by many Fortune 500 companies in the United States and other countries to solve manufacturing problems and create new products. The worlds leading authority on TRIZ Michael A. Orloff in his book “**Inventive thinking through TRIZ: a practical guide**” describes String Transport as the most comprehensive implementation of TRIZ principles particularly in relation to “The Law of the Ideality of a System”. TRIZ is also described as the science of Structured Innovation.



Critical to understanding the uniqueness of a String Transport System is the TRIZ Principle **Universality**

Principle Description: Make a system more uniform and comprehensive.

Have the object perform multiple functions, thereby eliminating the need for some other objects

When applying the Universality Principle to a system, look at creating a broader use; i.e., multi-purpose, multi-functional, and multi-scalar (different levels of the system). This is especially relevant as the core technologies of String Transport can be utilized for passenger, freight and high speed transport systems.

Dr. Michael Orloff identified 5 “revolutions” in development of the wheel:

1st revolution – invention of the wheel itself (approx 5000 BC)



2nd revolution – invention of a system wheel-paved road



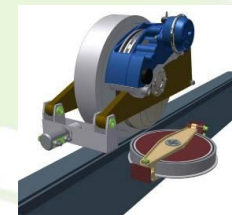
3rd revolution - invention of a system iron wheel-iron rail



4th revolution - invention of a system pneumatic tyre-paved road



5th revolution – optimized steel wheel-string rail – FINAL DEVELOPMENT CANNOT BE BETTERED WITHIN EXISTING SCIENTIFIC KNOWLEDGE OF THE UNIVERSE



APPENDIX 2 – TRIZ AND ITS APPLICATION TO STRING RAIL

The diagrams below show some of the calculations used in determining the size of conventional and string rail beams needed to support certain weights. Findings are that string rail would use approximately 1/10th of the material needed in conventional rail beams.

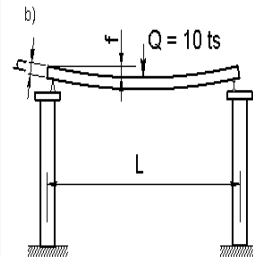
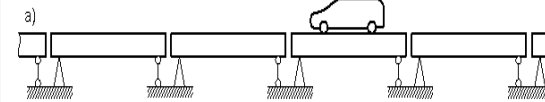
An almost 90% reduction in material is where significant capital cost savings are delivered.

The diagrams below show some of the calculations used in identifying and determining where energy is used in overcoming resistance in conventional and string rail transport.

Rigid Beam Structure

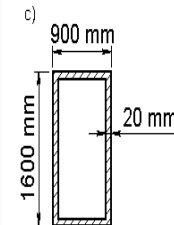
10Ton Load over 50m Span

String Rail Structure

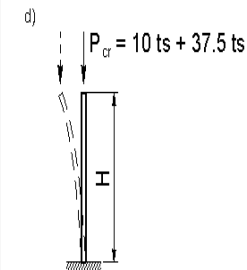


Specific deflection of a box-type beam:

$$\frac{f}{L} = \frac{QL^2}{48\alpha E h^3} + \frac{5}{384} \frac{GL^2}{\alpha E h^3}$$



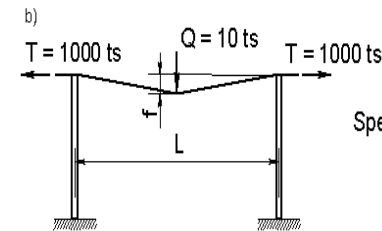
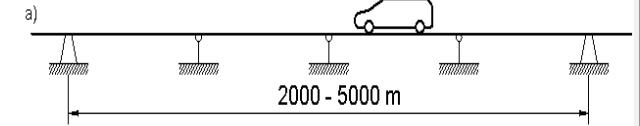
Where L = 50 m, Q = 10 ts, f / L = 1 / 400,
E = 2 · 10⁶ kgs/cm², [σ] = 2000 kgs/cm² (rolling):
F = 960 cm², ρ = 750 kg/m, G = 37.5 ts
ΔT_{Δt=100°C}^{max} = 2400 ts (solid beam)



Bearing capacity of a support:

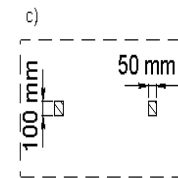
$$P_{cr} = \frac{\pi^2 E J_{min}}{(\mu H)^2} = \frac{1}{4} \left(\frac{\pi^2 E J_{min}}{H^2} \right),$$

where μH - reduced height of a support, μ = 2

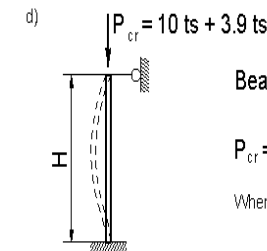


Specific deflection of a span:

$$\frac{f}{L} = \frac{Q}{4T}$$



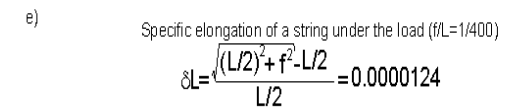
Where L = 50 m, Q = 10 ts, f / L = 1 / 400,
T = 1000 ts,
[σ] = 10000 kgs/cm² (high-strength wire):
F = 100 cm², ρ = 78 kg/m,
ΔT_{Δt=100°C}^{max} = 250 ts



Bearing capacity of a support:

$$P_{cr} = \frac{\pi^2 E J_{min}}{(\mu H)^2} = 2 \left(\frac{\pi^2 E J_{min}}{H^2} \right),$$

Where μH - reduced height of a support, μ = 0.7



Specific elongation of a string under the load (f/L=1/400)

$$\delta L = \frac{\sqrt{(L/2)^2 + f^2} - L/2}{L/2} = 0.0000124$$

Increase in the string strength under the load (f/L=1/400)

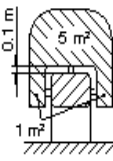
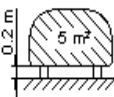
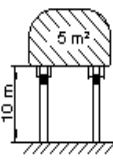
$$\sigma_0 [\sigma] = \delta L \cdot E = 24.8 \text{ kgs/cm}^2$$

Requires 37.5 Tons of Steel in the Beam

Requires 3.9 Tons of Steel in String Rail

APPENDIX 2 – TRIZ AND ITS APPLICATION TO STRING RAIL

Overcoming Resistance is Where the Majority of Energy is Consumed

Indicator		Aerodynamic resistance**			Rubber (K = 0.05)	Wheel		Magnet suspension + linear electric motor (40% efficiency)	Aerial suspension (air cushion) (30% efficiency)
		 $C_x^{\min} = 0.3$	 $C_x^{\min} = 0.2$	 $C_x^{\min} = 0.1$		Steel			
						Wheel pair with conic wheels (K = 0.001)	Wheel with an independent suspension without a cone (K = 0.0005)		
Single module	Resistance strength, kWt	1120	620	310	500	10	5	1700	2600
	Fuel consumption, t/year	1220	680	340	550	11	5.5	1800	2800
	Fuel cost, thousand USD/year***	610	340	170	275	5.5	2.75	900	1400
Module fleet on the Planet (10 mln. vehicles)	Resistance strength, mln. kWt	11200	6200	3100	5000	100	50	17000	26000
	Fuel consumption, mln. t/year	12200	6800	3400	5500	110	55	18000	28000
	Fuel cost, billion USD/year	6100	3400	1700	2750	55	27.5	9000	14000

* Average transportation module: travel speed - 100 m/sec (360 km/hour); mass - 10 t; carrying capacity - 25 passengers (8 tons of freight); usage coefficient - 0.5 (12 hours/day); fuel consumption - 0.25 kg/kWt.hour; maximum midsection of a saloon - 5 m²

** Aerodynamic resistance strength: $W_{ar} = \frac{1}{2} \rho v^3 \cdot c_x \cdot f_m$

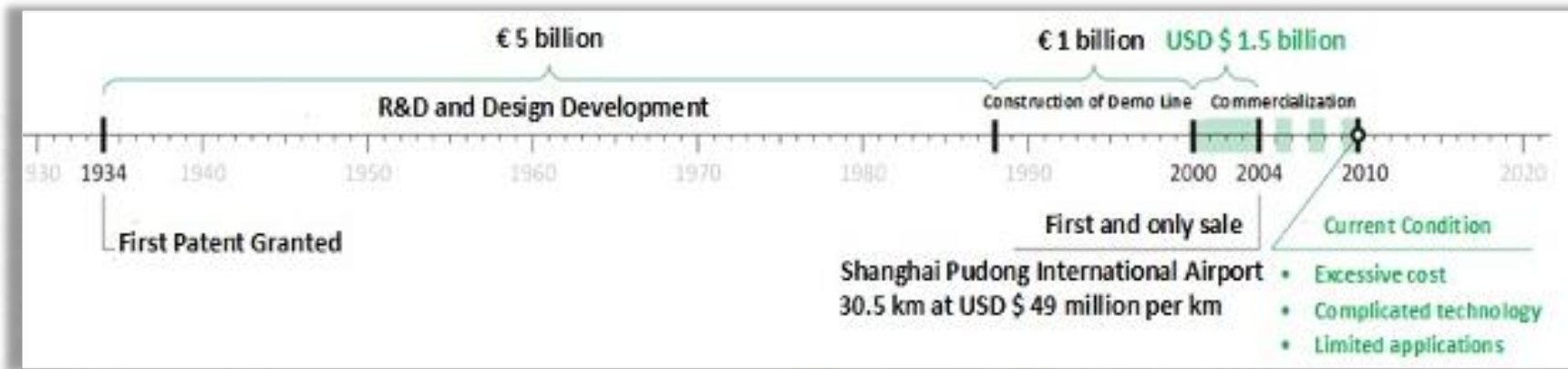
*** Average world cost of fuel - 0.5 USD/kg

String Transport Systems Rolling Stock uses between 5-50% the Energy of Conventional Systems for the same amount of transportation work.

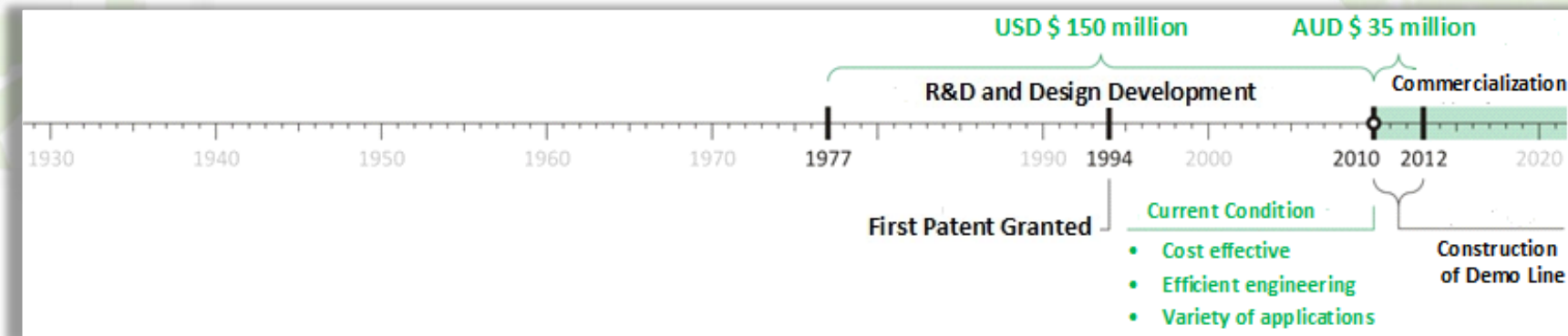
APPENDIX 3 – TRANSPRAPID PROJECT AND COMPARABLES

String Rail patents form part of the intellectual property that STS owns by way of its exclusive IP license. Whilst the investment in string rail technology to date has been significant, in comparison to the closest competition (the Trans Rapid™ maglev project for illustrative purposes), the expenditure on the STS technology has been frugal.

“Transrapid™ International” from idea to commercialization



“String Transport” from idea to commercialization



The Visionary of String Transport Systems – Dr. Anatoly Yunitskiy PhD


Dr Yunitskiy is the Managing Director of String Transport Systems Limited and is leading the design and development of the technical documentation and engineering works for the STS test track in Australia. He is an inspirational leader and mentor and his work on innovation and optimization of transportation systems has been expertly determined by author and Professor Michael A. Orloff to be 1 of the greatest 100 inventions of all time. True to the nature of Dr. Yunitskiy's creative genius he also has another invention on that same list which was developed whilst he was working with the Federation of Cosmonautics.

Dr. Yunitskiy is a keynote speaker and presenter and many international conferences and his steel wheel / steel rail pairing is considered to beyond any further possible optimization and brings the history of the wheel and its development path to a close.

Dr. Yunitskiy was born in 1949 in Kryuki village of Bragin district, Gomel Region (Republic of Belarus). In 1966 he graduated from the secondary school in the city of Dzhezkazan (Kazakhstan) and in 1967 became a student of Tyumen Industrial Institute. In 1973 graduated from Belorussian Polytechnic Institute, specialization — engineer of ways of communication (Equivalent Bachelor of Engineering of Transportation Infrastructure). In 1984 — higher education (second higher education) in patent and invention activity(Equivalent Bachelor of Law specialising in IP protection).

Qualifications / Associations

Doctor of Philosophy in Transportation;
 Member (Academician) Russian Academy of Natural Sciences;
 Member of the USSR Federation of Cosmonautics;

In 1988 retired from civil service as Chief of Patent and License Division at the Institute of Metal-polymeric System Mechanics under Belorussian Academy of Sciences (Gomel)

General designer of STU, author of a group of inventions “String Transport”;
 General Director — General Designer of String Transport Unitsky Co Ltd;

Author of more than 100 inventions (75 inventions with author's certificates of the USSR and 67 inventions with 43 patents) including the principal UST scheme. 26 inventions are applied in construction, machine-building, transportation, electronic and chemical industry and scientific research in the Russian Federation, Republic of Belarus, Ukraine and other CIS countries;

Author of more than 100 published papers in popular and scientific journals.
 Author of 5 scientific monographs;

Awards: Honorary “Knight of Science and Arts” of the Russian Academy of Natural Sciences

Two golden medals “Laureate of All-Russia Exhibition Centre” “Russian Mark” medals for string transport technology, design of freight and passenger rail vehicles

Dr Michael Orloff is a renowned expert, consultant, author and international trainer and presenter of TRIZ, the science of inventing. He lives and works in Germany and is a professor at the Technical University of Berlin.



Academy International for Modern TRIZ



Expert Opinion Letter

Evaluation of String Transport Unitsky (STU) technology, its technical feasibility and efficiency



The undersigned, Dr. Michael A. Orloff, Founder of the Academy International for Modern TRIZ (MTRIZ Academy) and professor for MTRIZ-course in Master of Science Program for "Global Production Engineering" at Technical University Berlin, is an internationally recognized expert in the field of TRIZ training and consulting. The MTRIZ Academy is an independent private research and teaching institution.

Theory of Inventive Problem Solving (TRIZ) is an empirical, constructive, qualitative and universal methodology to generate ideas and to solve problems especially in the development of technical systems. TRIZ is based on models of contradictions in technical systems and on methods for their solutions that were derived from known inventions. TRIZ is generally recognized as the Science that Studies the Process of Inventing.

During my work I have studied the group of inventions by Dr. Anatoly Unitsky known as String Transport Unitsky (STU). More than that I have considered it an honour to explore the possibilities of STU for last 15 years after my first acquaintance with the concept at the World Industrial Exhibition in Hannover, Germany in 1995. STU was presented at that exhibition by author Dr. Unitsky.

In my opinion STU is the one of the greatest inventions in technical systems evolution for last century. My arguments according to TRIZ laws of system development are set out here as following.

There are 8 abstract resources in TRIZ to model any artefact. And there are 8 theoretical spaces to analyse the level of development of any system.

System-technical resources

1. System. STU has to be recognized as the special niche in ground transportation. This niche opens a wide range of speeds for wheeled vehicles that was unachievable for other concepts in mass exploitation. Range of cruise speeds could be defined within limits of 400-600 km/h and of special high-speed mode – within of sound speed e.g. 800-1000 km/h. No one concept of known ground transportation is able to supply similar speeds with reasonable safety and energy consumption. According to TRIZ, this is a great transition into another system quality, in new world of transportation both for passengers and cargo transportations.

2. Information. STU is saturated with new ideas and knowledge related to the integrated social and technical progress, the newest material and energy use, the ecology and utility, etc. This is in a full accordance with TRIZ ideal model of "smart artifacts".

3. Function. Mission of STU is to create new generation of road communication, to supply new mentality in speed of ground motion, in safety and comfort, in ecology and esthetics, in architecture and Nature.

4. Structure. In macro-scale, STU is able to become a global "Transportation Internet". STU can become the most reliable ground transportation system that is out of range in reliability for any other ground transportation system. In local scale, STU has reinvented the wheel like very effective "eternal substance".

Physical-technical resources

5. Space. STU is used 3-rd dimension – height – for its realization. It means that STU requires minimal place at the ground for supporting pillars and other elements. This leads to incomparable ground saving. This solution is in full accordance with TRIZ model "Transition in another dimension" to resolve radical contradiction over the deficit of ground for new roads in developed countries.

6. Time. STU is used asynchronous timing for its functioning. It means that STU in accordance with TRIZ model "Uninterrupted useful function" has a tendency to maximal productivity.

7. Material. STU is used the special conditions of strongly stretched wires for assembly of each rail. The wires are stretched till string condition. Just this condition produces the specific properties of integrated construction of hundreds strings. Strings as the core of new structure of rail produce the ideally strait and high-speed way for wheeled vehicles. This is in a full accord with TRIZ trend to "smart materials".

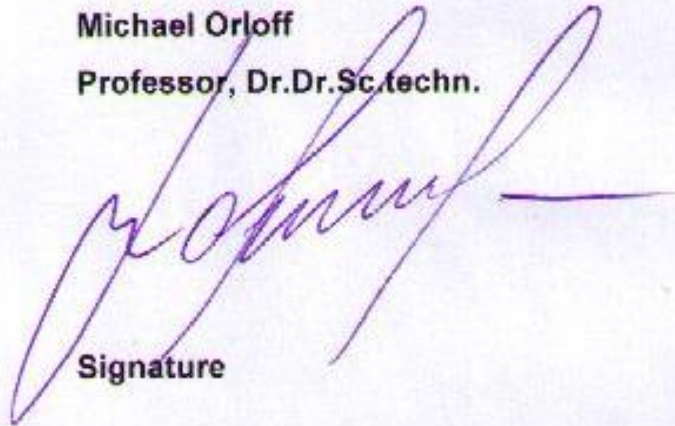
8. Energy. STU is the only transportation system that is the most effective in energy consumption and energy waste. It means that STU is the best transportation system for ecology. It is just very nice approach to "Ideal Machine" concept in TRIZ that generalize the best features in functionality by minimal payments for new advantages.

Consequently I am strongly convinced that STU fits with the main laws and trends of system development according to TRIZ.

More than that STU has induced many radical improvements in different engineering areas. It allows us to define STU like starting point to develop of new engineering branch – *string technologies*. "Strings" have to be widely adopted in many constructions – in transportation and bridge engineering, seismic architecture and aerodrome engineering, etc. All of this is also in accordance with one of the main TRIZ-law: transition into super-system level, producing the unexpected positive super-effects.

I am convinced that the time for STU has come.

Michael Orloff
Professor, Dr.Dr.Sc.techn.



Signature

14.04.2010

Date

Berlin, Germany