



## FIRST SPACE RENAISSANCE INTERNATIONAL CONGRESS – 2011 DAY 1 – JUNE 25<sup>TH</sup> 2011

### FREE CHAT BEFORE CONGRESS BEGIN

[15.23.18 | Edited 15.23.36] Adriano Autino: Conference will start at 15.00 GMT - in 1 hour and 40 minutes  
[15.26.28] Julio Gonzalez: Hi All.. Looking forward to it.  
[15.43.29] Keith Henson: not many on yet  
[15.44.01] Keith Henson: you might repeat this if I am not on when it starts. kind of food for thought  
<http://www.theoil drum.com/node/7898>  
[15.46.39] Scott Brown: logging in: Spaceport America, New Mexico--clear and calm ready for take-off  
[15.49.54] Prasenjit Jadhao: hello  
[15.52.10] Adriano Autino: Roger Spaceport America - takeoff in 1 hour and 9 minutes  
[15.52.24] Sean Con: roger that  
[15.52.26] Sean Con: standing by  
[15.57.58] \*\*\* Adriano Autino added Alberto Cavallo, Benjamin Higginbotham UTC -5, Cariann Higginbotham, Corrado Mauceri, Jun Okushi, marcello demuro, Mark Posen, popov.alain, Roberto Pallavicini, Senthilkumaran Thangavelu, Shanti Swaroop Kandala, James Gholston, tuttlepc, Rich Thoma \*\*\*  
[16.00.05] Keith Henson:  
[http://www.linkedin.com/news?viewArticle=&articleID=596874984&gid=2691820&type=member&item=59372366&articleURL=http%3A%2F%2Fwww.sei.aero%2Fcom%2Fnews%2Fnewsindex.php%3Fid%3D26&urlhash=VSW8&goback=.gde\\_2691820\\_member\\_59372366](http://www.linkedin.com/news?viewArticle=&articleID=596874984&gid=2691820&type=member&item=59372366&articleURL=http%3A%2F%2Fwww.sei.aero%2Fcom%2Fnews%2Fnewsindex.php%3Fid%3D26&urlhash=VSW8&goback=.gde_2691820_member_59372366)  
[16.01.02] Adriano Autino: Keith, prepare a short presentation, if you like  
[16.02.17] Adriano Autino: today agenda:

15.00 GMT

- a) chairperson election (Gail)
- b) approval of agenda (only members)

15.30 GMT

- c) presentation of ISSUE I (AA)
- [http://www.spacerenaissance.org/SRIC/ISSUE\\_I\\_ppt\\_PRESENTATION.pdf](http://www.spacerenaissance.org/SRIC/ISSUE_I_ppt_PRESENTATION.pdf)

16.15 GMT

- d) open discussion on ISSUE I (all can post, asking the floor to the chairperson)

17.00 GMT

- e) presentation of possible amendments to ISSUE I (members only)

18.00 GMT

- f) adjourn

[16.03.18] \*\*\* SpaceShaft has left \*\*\*  
[16.22.15] Sergio Lebid: Hello Adriano and All  
[16.23.00] Keith Henson: hmm. Adriano, what level should I assume? Does everyone know why there are no single stage to orbit rockets?  
[16.24.28 | Edited 16.27.36] Adriano Autino: I think so, but quick explanations would not be bad, we could have young people too  
[16.24.28] Anton Volkonskiy: Hi all  
[16.25.46] popov.alain: i do not know for exemple mister henson, i am 30  
[16.26.05] Anton Volkonskiy: What about Atlas?  
[16.26.42] popov.alain: some link mr henson ?  
[16.27.08] \*\*\* Adriano Autino added agravatb, Andreas P. Bergweiler \*\*\*

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- [16.27.41] Anton Volkonskiy: <http://en.wikipedia.org/wiki/Single-stage-to-orbit>
- [16.28.01] Robert L. Frantz: Bob Frantz
- [16.28.09] Keith Henson: That's more or less why you can't do it
- [16.28.13] Keith Henson: [15.36] Keith Henson:  
<<< <http://www.theoil drum.com/node/7898>
- [16.28.17] Keith Henson: is no you can
- [16.28.59] Keith Henson: the problem is low exhaust velocity from all rockets, the best is about 4500 m/s
- [16.29.24] Keith Henson: takes about 9000 to get to orbit
- [16.29.33] popov.alain: thanks i am reading your link
- [16.29.48] Adriano Autino: CONFERENCE WILL START AT 15.00 GMT - IN HALF AN HOUR
- [16.30.51] Keith Henson: to get to 9000 on 4500 takes a mass ratio, the ratio of full to empty of 7.4
- [16.30.57] \*\*\* Adriano Autino added arno wielders \*\*\*
- [16.31.36] Keith Henson: which means the rocket structure and payload can only be 13.5% of the takeoff mass
- [16.32.30] Sean Con: hkhenson: what propulsion are we talking about?
- [16.32.53] Keith Henson: given existing materials, a reusable rocket needs to be at least 15% structure. we can build SSTO, but they have no payload and can't be reused. SSME hydrogen and oxygen, the best practical
- [16.33.23] Keith Henson: anything higher takes external heating
- [16.34.18] Keith Henson: and only very recently have big lasers been practical. people designed them for cutting steel.
- [16.34.38] \*\*\* Adriano Autino added Dinesh Kumar, Elif Muftuoglu, erniegarcia77, Marc Jochemich, lou.bilancia, Nebojsa Stanojevic, neda.g.ansari, Patti Hultstrand, paul mcdonnell \*\*\*
- [16.34.45] G B Leatherwood: I'm here and ready. Anxious to see how this works and who shows up.
- [16.35.28] Keith Henson: going to stay in this mode or go to audio?
- [16.35.41] Nebojsa Stanojevic: I am here as well. Hi all
- [16.35.45] Sean Con: chat works best for me
- [16.35.47] Adriano Autino: only chat
- [16.35.54] Julio Gonzalez: I am here too!!
- [16.36.05 | Edited 16.36.13] Adriano Autino: skype doesn't work fine with more than 5 or 6 audio connections...
- [16.36.12] Julio Gonzalez: so for me...
- [16.36.32 | Edited 16.36.43] Adriano Autino: Hi Neb!!! great to see you!
- [16.36.53] Nebojsa Stanojevic: same to you ;)
- [16.36.57] Adriano Autino: Hi Julio!
- [16.37.10] Julio Gonzalez: Hi Adriano...
- [16.37.14 | Edited 16.37.38] Adriano Autino: Hi Gail
- [16.37.46] G B Leatherwood: I know it's important, but this is not the place to get tangled up in rocket technology.
- [16.38.54] Adriano Autino: Gail, we still have 20 minutes before t0...
- [16.38.55] Anton Volkonskiy: Hi Neb
- [16.39.01] Anton Volkonskiy: Long time
- [16.39.10] Anton Volkonskiy: brb
- [16.39.16] Sean Con: hi, i am willing to and (and should) listen to, and organise all discussions related to rockets
- [16.39.23] Adriano Autino: maybe people have some curiosity, and Keith can answer
- [16.40.36] Sean Con: hkhenson: please mention which kind of propulsion we are talk about.....
- [16.41.00 | Edited 16.41.58] Sean Con: otherwise the discussion will not go anywhere... if we do not discuss the detail
- [16.41.24] \*\*\* Adriano Autino added Walter C. Putnam \*\*\*
- [16.41.54] Adriano Autino: Walt, can you read this
- [16.42.24] Keith Henson: Sean, I did, SSME hydrogen and oxygen, the best practical, 4500 m/s exhaust velocity
- [16.42.28] Anton Volkonskiy: im back
- [16.42.33] Sean Con: good
- [16.42.33] Anton Volkonskiy: Neb!
- [16.42.42] Keith Henson: SSME space shuttle main engine
- [16.43.10] Sean Con: and how does the complete plan look like?
- [16.43.30] Adriano Autino: ... this is a free conversation, before the beginning of the conference...
- [16.44.07] G B Leatherwood: Adriano,, OK, got it. My bad.
- [16.44.09] Keith Henson: sean, was just talking about why we don't have SSTO and never will on chemical propulsion
- [16.44.44] Keith Henson: there is a way around it though, hydrogen will give up to 10 km/s exhaust velocity if you get it hot enough
- [16.45.08] wheatsheaf1: hi folks, I'm Rob. A \*very\* newbie to the astronomy/space science scene so will probably just listen and learn....

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- [16.45.18] Adriano Autino: Gail, you were right to recall that the main focus of this congress is political, though technology has a relevant place of course
- [16.46.13] Adriano Autino: CONFERENCE WILL START AT 15.00 GMT - IN 15 MINUTES
- [16.46.14] Keith Henson: if the technology won't let you do something, all the politics in the world won't help get it done
- [16.46.28] Sean Con: hkhenson :D
- [16.46.32] Sergio Lebid: Exactly Keith
- [16.46.41] Adriano Autino: Hi Sergio!
- [16.46.59] Adriano Autino: but you can't go anywhere, without a good politics
- [16.47.00] Sergio Lebid: Hi Adriano!!! And All!!!
- [16.47.13] Sean Con: also hkhenson : what about , say, nuclear propulsion ?
- [16.47.18] Julio Gonzalez: Hi Sergio, nice to "see" you
- [16.47.18] Sean Con: HI SERGIO .....!!!!!!!!!!!!!!
- [16.47.31] Adriano Autino: well, seems that technology vs. politics will be the climax of this conference!
- [16.47.33] Sergio Lebid: Good politics and greater technology go hand in hand..
- [16.47.40] G B Leatherwood: We have, and have had, the technology, but not the political will. If the people don't care, the technology won't matter.
- [16.47.47] Dr. Feng Hsu: hello, Adrian & everyone attending the SRI congress....how are all you doing?
- [16.47.56] Keith Henson: sean, that will get hydrogen hot enough. but it's a bit of a political problem to fly reactors
- [16.48.04] Adriano Autino: Feng! very very happy to see you!!
- [16.48.07] Keith Henson: not to mention they are kind of heavy
- [16.48.14] Sergio Lebid: Gail, our present technology is obsolete
- [16.48.18] Anton Volkonskiy: Hi Feng!
- [16.48.26] popov.alain: there is one thing everybody can do for sbasp, is writhing in wikipedia about it in many languages as possible
- [16.48.38] Sean Con: i thought besides being heavy they can also pump more power.....
- [16.48.46] Dr. Feng Hsu: I too, very very happy to see you all as well
- [16.48.52] \*\*\* Adriano Autino added SpaceShaft \*\*\*
- [16.49.00] Keith Henson: sean, read about them on wikipedia
- [16.49.07] Dr. Feng Hsu: Hello Digger
- [16.49.17] Arthur Woods: Arthur here, hello all
- [16.49.24] Adriano Autino: Hi Arthur!
- [16.49.37] Dr. Feng Hsu: We have about 10 minutes before the formal start of the SRI congress right?
- [16.49.39] Keith Henson: This is my slightly out of date thinking on the topic of SSTO or more like two stage to GEO <http://www.theoil drum.com/node/7898#more>
- [16.49.53] Adriano Autino: CONFERENCE WILL START AT 15.00 GMT - IN 10 MINUTES
- [16.49.53] G B Leatherwood: Yes, Sergio, you're right--th current technology is obsolete, but the political will to fund breakthroughs, or even substantial improvements, has not been there.
- [16.50.12] Sean Con: hkhenson ..
- [16.50.22] Anton Volkonskiy: SBSP have a huge security hole
- [16.50.38] Keith Henson: why anton?
- [16.51.03] Sergio Lebid: Gail, politics will be pushed and influenced by compelling results vis-a-vis technology and money
- [16.51.18] Sean Con: i believe, the rion machine can give  $10^6$  seconds of 1 kg-f specific impulse with one kg fuel
- [16.51.27] Anton Volkonskiy: if misoriented orbital power station beams microwave over any city - consequences are fatal
- [16.51.29] Sean Con: the figure for a H2 powered motor is 450
- [16.51.44] Sean Con: \*\*Orion
- [16.51.47] Keith Henson: the microwave beam makes a very poor weapon.
- [16.51.54] Keith Henson: and they are not fatal
- [16.52.14] Anton Volkonskiy: megawatt at your roof will enite it
- [16.52.19] Anton Volkonskiy: ignite
- [16.52.26] Sean Con: so a Orion motor, despite being heavy, is QUITE efficient
- [16.52.44] Keith Henson: peak power is under  $250 \text{ w/m}^2$
- [16.53.27] G B Leatherwood: Anton, common misconceptions. If the beam strays off the target for even a millisecond the beam stops. It's also not strong enough to harm anything, which is why the military has abandoned it.
- [16.53.30] Keith Henson: roofs don't catch on fire from the sun which is 5 times that high

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- [16.54.04] Sean Con: compare with sun :1.36 kW/m<sup>2</sup>  
[16.54.05] Anton Volkonskiy: ok, but then what you would power with this energy? Notebook?  
[16.55.03] Keith Henson: rectenna sites are huge, around 100 km<sup>2</sup>  
[16.55.11] Keith Henson: 5 GW from one of them  
[16.55.16] Adriano Autino:  
CONFERENCE WILL START AT 15.00 GMT - IN 5 MINUTES  
[16.55.24] Keith Henson: you should read up on power satellites  
[16.55.33] Sean Con: anton: that is the best question so far  
[16.56.15] Anton Volkonskiy: LOL everybody (rofl)(y)  
[16.57.01] Adriano Autino: CONFERENCE WILL START AT 15.00 GMT - IN 3 MINUTES  
[16.57.12] Sean Con: anton : seriously  
[16.57.18] Sean Con: we need a goal ..  
[16.57.20] Anton Volkonskiy: yes  
[16.57.24] Anton Volkonskiy: i was kidding  
[16.57.26] Anton Volkonskiy: lol  
[16.57.39] Sean Con: i do not want to sound like the manager who organizes a meeting, defines a mission statement to change an auto tire  
[16.57.41] Keith Henson: goal of not dying from famine seems good  
[16.57.43] Sean Con: but we need trgets  
[16.57.52] Keith Henson: because that's what happens when the energy runs out  
[16.58.04] Adriano Autino: CONFERENCE WILL START AT 15.00 GMT - IN 2 MINUTES  
[16.58.14] Sean Con: hkhenson: prrove it : figures?  
[16.58.15] Anton Volkonskiy: Energy will never run out  
[16.58.34] Sergio Lebid: @Keith - exactly  
[16.58.34] Keith Henson: oil energy that is  
[16.58.37] Sean Con: Anton : unfortunately, workable energy is running out ..  
[16.58.46] Sean Con: no one can do nothing about it  
[16.58.51] Anton Volkonskiy: Renewable sources?  
[16.59.01] Adriano Autino: CONFERENCE WILL START IN 1 MINUTE  
[16.59.06] Keith Henson: that's what space based solar power is all about  
[16.59.11] Sean Con: the universe is going towards a thermodynamic death : second law  
[16.59.17] Keith Henson: and it's the one economic reason for people to go into space  
[16.59.31] Anton Volkonskiy: SBSP will not let run out the energy  
[16.59.55] Adriano Autino: CONFERENCE WILL START IN 30 SECONDS  
[17.00.17] Adriano Autino: CONFERENCE BEGINS NOW!

CONGRESS BEGIN HERE – ELECTION OF THE CHAIRPERSON

- [17.00.25] \*\*\* agravatb has left \*\*\*  
[17.00.33] Adriano Autino: ok firend,let's start our works  
[17.00.49] Adriano Autino: first of all, we have to elect a chairperson  
[17.00.54] Adriano Autino: I propose Gail  
[17.01.03] Sergio Lebid: I second  
[17.01.07] Julio Gonzalez: I second too  
[17.01.08] Sean Con: third  
[17.01.09] Adriano Autino: that prepared himself for this not easy task  
[17.02.34] \*\*\* Adriano Autino removed Dr. Feng Hsu from this conversation. \*\*\*  
[17.02.42] \*\*\* Adriano Autino added Dr. Feng Hsu \*\*\*  
[17.03.03] Adriano Autino: anybody proposes someone else?  
[17.03.16] Anton Volkonskiy: no  
[17.03.37] Walter C. Putnam: Looks like its unanimous  
[17.03.56] SpaceShaft: no  
[17.04.01] SpaceShaft: ok  
[17.04.47 | Edited 17.05.08] Adriano Autino: Gail B. Leatherwood is a space journalist, he writes for SpaceFuture  
[17.05.13] Walter C. Putnam: Thanks for chairing, Gail  
[17.05.28] Adriano Autino: Gail, please take the rudder  
[17.05.51] Julio Gonzalez: Adriano a parenthesis : Feng is asking for help--



[17.06.02 | Edited 17.06.55] Julio Gonzalez: he is in another chat and needs to get into this one  
[17.06.17] Krahazik Dragon: wouldn't helm be a better analogy instead of rudder?  
[17.06.36] Sean Con: :D  
[17.06.40] Sean Con: (rofl)  
[17.07.26] Adriano Autino: ok, sorry, i am not English mother tongue, forgive me when i am dense...  
[17.07.48 | Edited 17.07.58] Adriano Autino: however, Gail, please take the control, we ready to takeoff  
[17.08.08] Sergio Lebid: You are good Adriano  
[17.08.39] G B Leatherwood: OK, my loins are girded and my skin is thickened (I hope!)

## AGENDA OF DAY 1

[17.09.19] G B Leatherwood: The first order of business was electing a chair; Done. Second order is approving the agenda, which is:  
[17.09.42] \*\*\* Adriano Autino added Jennifer Bolton \*\*\*  
[17.10.42] G B Leatherwood: 1530 Presentation of Issue I by Adriano. I'm assuming all here have read the Issue or are at least familiar with it. If not, Adriano will give us the reference to look at it while we're discussing later.  
[17.11.43] G B Leatherwood: 1615 Open discussion of Issue I. Please keep track of your comments, questions, suggestions, et al., until Adriano finishes his presentation.  
[17.12.08] popov.alain: is this a chat or audio conf ?  
[17.12.13] G B Leatherwood: 1700 Members can present amendments to Issue I.  
[17.12.18] Julio Gonzalez: chat  
[17.13.22] G B Leatherwood: Alan: Because of the technical issues with Skype and video, this has to be text only chat format. Clumsy, but workable if we behave ourselves.  
[17.13.36] popov.alain: ok thank you  
[17.13.51] Sean Con: stupid skype has been bought over clumsy m\$  
[17.14.41] G B Leatherwood: Maybe, probably, but we do what we can with what we have where we are. Adriano, are you ready, my friend?

## PRESENTATION OF ISSUE I – BY A. V. AUTINO

[17.15.22] Adriano Autino: yes, thanks, Gail  
[17.15.46] Adriano Autino: may i ask all the present to write READY? just to see how many we are  
[17.15.54] Walter C. Putnam: ready  
[17.15.55] popov.alain: ready  
[17.15.58] Krahazik Dragon: Ready  
[17.15.58] SpaceShaft: READY  
[17.15.59] wheatsheaf1: ready  
[17.16.02] Sean Con: (½)READY  
[17.16.02] Arthur Woods: ready  
[17.16.03] Sergio Lebid: READY  
[17.16.06] Anton Volkonskiy: ready  
[17.16.08] Jennifer Bolton: ready  
[17.16.12] Kim Peart: Ready  
[17.16.19] Keith Henson: ready  
[17.16.21] Robert L. Frantz: Ready.  
[17.16.33] Anton Volkonskiy: neb?  
[17.16.45] Nebojsa Stanojevic: ready  
[17.16.48] Adriano Autino: Maria?  
[17.17.04] Dr. Feng Hsu: see 85 people in this room, maybe this is it...?  
[17.17.17] Sean Con: dr. hsu: yes  
[17.17.18] Julio Gonzalez: yes  
[17.17.20] Adriano Autino: yes, Feng! welcome again  
[17.17.25] Julio Gonzalez: welcom Dr. Feng  
[17.17.30] Adriano Autino: ok  
[17.17.33] Dr. Feng Hsu: Great!  
[17.17.39] SpaceShaft: brb

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- [17.17.49] Adriano Autino: we can start, some minutes in advance , great!  
[17.17.51] Dr. Feng Hsu: sorry for the delays...  
[17.18.50] G B Leatherwood: Adriano has the floor. Please hold your comments until he either finishes or gives a signal for open discussion.  
[17.18.55] Adriano Autino: don't worry, Feng, we're in advance  
[17.18.57] Adriano Autino: ok  
[17.19.07] Dr. Feng Hsu: good  
[17.19.14] Adriano Autino: so, just to start, let me say that I am very pleased to have all of you here  
[17.19.16] \*\*\* Jesper Jorgensen has left \*\*\*  
[17.19.44] Adriano Autino: i have to say something, firstly  
[17.20.03] Adriano Autino: I will not speak as an European, but as a Human Earthling  
[17.20.23] Adriano Autino: in my presentation i will move some hard criticism  
[17.20.47] Adriano Autino: mainly to the space policy of the last 40 years  
[17.21.08] Adriano Autino: such criticism is not addressed to any national responsibilities  
[17.21.27] Adriano Autino: it is to be intended as a golbal criticism to the Earth Space Spolicy  
[17.21.48] SpaceShaft: :)  
[17.22.13] Adriano Autino: thugh of course that was leaded but some main governments, who had the economic power to do it  
[17.22.46] Adriano Autino: so please take my words as a positive criticism, with the aim to reach a finally good and effective strategy  
[17.23.03] Adriano Autino: and work all together for the shared goals  
[17.23.36] Adriano Autino: now, please, if you didn't yet done, please download this file:  
[http://www.spacerenaissance.org/SRIC/SRIC\\_ISSUE\\_I\\_the\\_SRI\\_program\\_2011\\_2015.pdf](http://www.spacerenaissance.org/SRIC/SRIC_ISSUE_I_the_SRI_program_2011_2015.pdf)  
[17.23.46] wheatsheaf1: point of order Gail?  
[17.23.53] G B Leatherwood: Yes  
[17.24.18] wheatsheaf1: could presenters please tell us their credentials/position briefly?  
[17.25.02] G B Leatherwood: OK. Adriano is our only presenter so far, but that will be fine later on during open discussion. OK?  
[17.25.10] wheatsheaf1: TNX  
[17.25.32] Adriano Autino: did everybody open the presentation?  
[17.25.42] Julio Gonzalez: yes.  
[17.25.45] Bahadır Hilmi ALPER: yes  
[17.25.48] wheatsheaf1: yes  
[17.25.54] Walter C. Putnam: yes  
[17.25.56] popov.alain: yes  
[17.26.03] Anton Volkonskiy: yes  
[17.26.26] SpaceShaft: yes  
[17.26.55] Krahazik Dragon: yes  
[17.26.59] Adriano Autino: may i start?  
[17.27.11] Sergio Lebid: yes  
[17.27.15] Julio Gonzalez: GA  
[17.28.27] SpaceShaft: ok  
[17.28.56] Adriano Autino: ok, the title says assuring survival, employment amd a uture for all of our childrens by bootstrapping the Solar Civiliaztion  
[17.29.22] Adriano Autino: Solar Civilization means a civilization targeted to expand into teh solar system  
[17.29.29] Adriano Autino: so this is our long term committment  
[17.29.51] Adriano Autino: water and life components are everywhre, inside the Oort cloud, where we live  
[17.30.04] Adriano Autino: solar system is exactly at the center of a big snow ball  
[17.30.08] Adriano Autino: the Oort Cloud  
[17.30.24] Adriano Autino: there are trillions of comets all aorund us  
[17.30.30] Dr. Feng Hsu: Yes, yes, yes, solar civilization is the right word for humanity  
[17.30.49] Adriano Autino: we will never dye of famine nor thirst, in this corner of teh Universe  
[17.31.01] Adriano Autino: thank you Feng  
[17.31.20] Adriano Autino: as you all know, the Space Renaissance was created as pilosophical association  
[17.31.43] Adriano Autino: since our main task is to refound the huamn philosophy, completing the Copernican revolution



- [17.32.15] Adriano Autino: we are more environmentalist than environmentalists, since our concept of environment encompasses the whole solar system
- [17.32.21] Adriano Autino: and beyond
- [17.33.03] Adriano Autino: for example, we don't only care about our planet's surface environment, but also about the Earth's orbit, our interface to Cosmos
- [17.33.29] Adriano Autino: having said that, let's go to page two of the presentation, please
- [17.33.58] Adriano Autino: it is a small history of the Space Renaissance, from its very beginning in 2008
- [17.34.23] Adriano Autino: I think there's not much to add, when everybody will have read it
- [17.35.07] Adriano Autino: who are we? I am a small entrepreneur, in the field of computer science and systems engineering
- [17.35.13] Adriano Autino: the other founders
- [17.35.36] Adriano Autino: sorry, few more words about myself
- [17.36.03] Adriano Autino: I begun to think about the humanity future in 80s
- [17.37.08] Adriano Autino: i begun criticising the ecologist thought, that made a somehow shareable analysis but only proposed humanity to disappear, to save the planet
- [17.37.48 | Edited 17.37.57] Adriano Autino: I made my first space advocacy web page in 1997, when i participate to the IAF congress in Torino
- [17.38.13] Adriano Autino: I met Patrick Collins in 1998, at the Melbourne IAF Congress
- [17.38.32] Adriano Autino: and Michael Martin Smith one year before
- [17.39.01] Neda Ansari: Hi everyone. Apologies for being late.
- [17.39.21] Adriano Autino: after that Patrick, Michael, Arthur, and many other friends kept on collaborating, until 2008, when Patrick and myself had this wonderful idea of the Space Renaissance
- [17.39.43] Adriano Autino: thinking about the 1500 Renaissance... we said, we would need some Medici families today...
- [17.39.46] Adriano Autino: and here we are
- [17.39.48 | Edited 17.39.55] Adriano Autino: Hi Neda
- [17.40.25] Dr. Feng Hsu: Hi, Neda!
- [17.40.27] Adriano Autino: I think everybody know Patrick Collins, a true pioneer of Space Tourism and SBSP
- [17.41.03] Adriano Autino: during 2009 the SRI grwe up, and many other friends joined us, Feng, for instance
- [17.41.42] Adriano Autino: We helped Feng to write an excellent paper, maybe the first serious temptative to make a criticism to the NASA policy
- [17.42.15] Adriano Autino: in that paper Feng pointed our how, after Apollo 11, NASA didn't have a strategic vision anymore
- [17.42.48] Adriano Autino: this position was recalled by the Jeff Greason speech at ISDC 2011
- [17.42.56] Dr. Feng Hsu: Well, Adriano that paper cost my NASA top technical job but I am happy as it was worth it....
- [17.43.18] Adriano Autino: that paper is one of our milestones
- [17.43.28] Adriano Autino: however, let's go to page 3 please
- [17.44.20] Adriano Autino: teh two main agencies, during 70's, didn't have a strategic focus on astronautics
- [17.44.58] Adriano Autino: ESA was mainly focused on telecommunication and Earth observing, and never joined the so-called 'astronautic club'
- [17.45.24] Adriano Autino: teh astronautic club was made just by USA and URSS, for so many years
- [17.45.38] Adriano Autino: then China joined it, in 2004
- [17.45.58] Adriano Autino: the NASA strategy was focuses on science and exploration
- [17.46.13] Adriano Autino: nobody talked about space industrialization
- [17.46.39] Adriano Autino: of course somebody did it: Kraffy Ehricke, and Gerard O'Neill, and Werber Von Braun...
- [17.46.51] Adriano Autino: but all of their works remained closed in the drawers
- [17.47.23] Adriano Autino: let's begin to say that , at SRI, our strategy is Astrnaotics, i.e. Human Space Flight
- [17.47.43] Adriano Autino: that means:
- [17.47.45] Dr. Feng Hsu: Adriano... China joined the club in 2003....
- [17.47.45] Adriano Autino: – downsizing the cost to orbit (very preliminary urgent step)
- Space industrialization (settling firstly in the Geo-Lunar system, begin living and working overthere)
  - conveing public support and private investments on the new space industry
  - urging governments to develop the Space Based Solar Power
  - developing a space policy harmonizing the interests of the people of the PostIndustrial Countries(POIC), of the New-Industrial Countries (NEIC), and of the Pre-Industrial (PRIC) ones



- [17.48.26] Adriano Autino: yes, Feng, you right, it was one year before the SpaceShipOne glorious flight
- [17.49.07] Adriano Autino: the above is in tune with what Jeff Greason stated: strategy has to be space settlement
- [17.49.28] Adriano Autino: without a strategy we will keep on going nowhere
- [17.49.45] Adriano Autino: our first duty, as SRI, is to provide the best strategy
- [17.49.48] Adriano Autino: we can do it
- [17.50.03] Adriano Autino: we have the best philosophical elaboration of the whole space community
- [17.50.24] Neda Ansari: I agree on that one.
- [17.50.26] Adriano Autino: now, let's see where we are, and why we are here
- [17.50.37] Adriano Autino: page 4 please
- [17.50.47] Julio Gonzalez: (clap)
- [17.51.33] Adriano Autino: oh, page 4 still spends some words about justification of our strategical points
- [17.51.47] Adriano Autino: a key word is 'industrialization'
- [17.52.12] Adriano Autino: that is a concrete word, not just dreaming, not just exploration, not just sending robots around...
- [17.52.39] Adriano Autino: downsizing the cost to orbit is the very first step, without that we will not go anywhere
- [17.53.27] Adriano Autino: conveying public support and private investments to the new space industry means go over the old diatribe between public and private: we need a choral effort
- [17.53.43] Adriano Autino: last but not least, we are an international association
- [17.54.08] Adriano Autino: we shall speak a language understandable by all the Earthling communities and people
- [17.55.05] Adriano Autino: we know perfectly that Americans and Europeans have different interests, respect Indians, Chinese, Brazilians
- [17.56.13] Adriano Autino: while we (post industrial countries) believe that we have solved the basic needs, and we care about environment, the new industrial people still have to get a car, a tv set, a refrigerator and a wash machine...
- [17.56.25] Adriano Autino: we are the Space Renaissance International
- [17.56.53] Adriano Autino: we have to talk to them as we talk to the post industrial people, and also to the pre-industrial ones
- [17.57.03] Adriano Autino: the Renaissance is for everybody
- [17.57.07] Adriano Autino: or it will never be
- [17.57.34] Adriano Autino: on page 5
- [17.57.57] Adriano Autino: a bit of history is necessary, to understand where we are, and why
- [17.58.23] Adriano Autino: in short: during 60's the focus was on Astronautics
- [17.58.43] Adriano Autino: we know why, the cold war imposed to demonstrate who was the best
- [17.58.48] Adriano Autino: to win the space race
- [18.00.45] G B Leatherwood: Please hold comments until Adriano finishes. He has the floor.
- [18.01.28] Adriano Autino: or at least be short, please :)
- [18.01.55] Adriano Autino: 20% of the world was industrialized
- [18.02.09] Adriano Autino: and the space ocean (Earth's orbit) was clean
- [18.02.36] Adriano Autino: on page 6
- [18.02.54] Adriano Autino: from 70's to 2000, the focus changed
- [18.03.12] Adriano Autino: the big lobbies decided it was better to earn some money from space
- [18.03.26] Adriano Autino: and begun orbiting telecommunication satellites
- [18.04.34 | Edited 18.04.53] Adriano Autino: the ISS was built, costing a lot, being on a wrong orbit, useless for any intermediate station, and repeating substantially what was already done in MIR
- [18.05.49] Adriano Autino: X15 was abandoned, and the space shuttle was built, in 5 unique pieces, without running an industrial development line, and avoiding to make a true RLV
- [18.06.18] Adriano Autino: the Scientific payloads took place as well
- [18.06.25] Adriano Autino: the focus was: Earth & Business
- [18.06.45] Adriano Autino: result: our space ocean was filled up of garbage
- [18.07.00] Adriano Autino: in the same time Earth's population reached 6 billions
- [18.07.07] Adriano Autino: page 7
- [18.07.38] Adriano Autino: is a realistic view of the 5500 tons of space debris currently orbiting around Earth
- [18.08.16] Adriano Autino: during the last ten years such an insane politics kept developing
- [18.08.34] Adriano Autino: nowadays we have large new economic powers on Earth
- [18.08.59] Adriano Autino: it means we are industrialized/ing maybe at 60-70%
- [18.09.19] Adriano Autino: you see the Earth is getting red, in the center of an iron cage
- [18.09.37] Adriano Autino: and the Earth's population is reaching 7 billions this year
- [18.09.58] Adriano Autino: we are in the middle of a process I'd call 'metaphysical warming'





- [18.10.24] Adriano Autino: that's not exactly the 'global warming' referenced by many
- [18.11.02] Adriano Autino: it is made by many perceptions, rights demand, environmental decay, resource wars, and fear of the future
- [18.11.16] Adriano Autino: page 8
- [18.11.46] Adriano Autino: to keep on supporting the development only on Earth would accelerate the implosion of the civilization
- [18.12.18] Adriano Autino: we do need with great urgency to bootstrap the exo-development
- [18.12.31] Adriano Autino: page 9
- [18.12.47] Adriano Autino: to recover the space debris
- [18.13.06] Adriano Autino: btw, many of them could be used to build the orbiting infrastructure
- [18.13.28] Adriano Autino: to develop orbiting industry, hotel accommodations
- [18.13.50] Adriano Autino: to develop Moon infrastructures, and Lagrange Points ones
- [18.14.10] Adriano Autino: to start catching Near Earth Asteroids,
- [18.14.28] Adriano Autino: some of them are easier to reach than what people imagine
- [18.14.40] Adriano Autino: the required delta V is very low
- [18.14.55] Adriano Autino: NEA are made of almost pure minerals, also precious metals
- [18.15.07] Adriano Autino: what do we need to do that?
- [18.15.24] Adriano Autino: here comes the hardest criticism
- [18.15.56] Adriano Autino: The lack of a strategy on astronautics, after the Moon landing, brought the civilization in the current situation: growing up and warming in an iron cage
- [18.16.10] Adriano Autino: on the long distance, we can say that Russians won the space race, since the old soviet Sojuz will be the only orbit vehicle, in the near future
- [18.16.28] Adriano Autino: China owns the US public debt, and is going to own more (Greece, for instance)
- [18.16.52] Adriano Autino: America had (and has) the best space technology, but lacking of a political strategical vision
- [18.17.16 | Edited 18.17.25] Adriano Autino: Russia and China had a very bad politics.
- Seems that having any political strategical vision is however better than having none vision
- [18.17.46] Adriano Autino: Simply thrust in technology, and its capability to affirm on the free market, doesn't work
- [18.17.49] Julio Gonzalez: (clap)
- [18.17.58] Adriano Autino: (of course it doesn't exist such a thing like a true free market, but only monopolies, lobbies and greedy commercial barriers...)
- [18.18.25] Adriano Autino: Even a bad politics won vs. a good technology.
- Let's think about what a good politics could do.
- [18.18.35] Adriano Autino: !!!
- [18.19.10] Adriano Autino: now, let's go quickly to the end of this presentation...
- [18.19.23] Adriano Autino: following page (10, I think)
- [18.21.10] Adriano Autino: I just would like to recall these statements, that try to put in a good sort some of the development lines:
- [18.21.24 | Edited 18.21.39] Adriano Autino: develop SBSP firstly to feed space customers  
develop massive SBSP following Civilian Astronautics, not before, and not  
instead of Civilian Astronautics
- [18.22.18] Adriano Autino: we are all supporters of SBSP, but, should SBSP become the new 'telecommunication' business, we would have failed
- [18.22.41] Adriano Autino: we cannot bear other 40 years like the past ones
- [18.22.52] Adriano Autino: we need to fly
- [18.22.59] Adriano Autino: not just to fly robots
- [18.23.08 | Edited 18.23.25] Adriano Autino: have you ever dream about flying, over valleys and seas?  
It could mean it is written in our dna, maybe our ancestors used to fly, in zero g...  
we just want to go back home, maybe
- [18.24.44] Adriano Autino: on the following pages I recall the summary of the analysis contained in the book "Three Theses for the Space Renaissance"
- [18.25.24] Adriano Autino: That is the substance of the criticism to the XX Century ideologies, still dominant
- [18.25.36] Adriano Autino: both have clamorously failed
- [18.25.57] Adriano Autino: Chernobyl was the failure of the real socialist ideology
- [18.26.14] Adriano Autino: Gulf of Mexico and Fukushima are the failure of the liberist ideology
- [18.26.25] Adriano Autino: point, return

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- [18.27.51 | Edited 18.28.03] Adriano Autino: we keep in voting for utopias, but we have in change the real liberism, with all of its greediness, monopoles, commercial barriers, and real socialism, with its lack of liberty, suppression of initiatives and of any excellence in the name of a supposed "collective good"
- [18.28.22] Adriano Autino: humanity is enough of such old ideologies
- [18.28.30] Adriano Autino: humanity needs renaissance
- [18.28.34] Adriano Autino: Space Renaissance
- [18.28.52] Sergio Lebid: (clap)
- [18.29.04] Julio Gonzalez: (clap)
- [18.29.08] wheatsheaf1: (clap)
- [18.29.26] Dr. Feng Hsu: (clap)
- [18.29.50] Krahazik Dragon: (clap)
- [18.30.03] Anton Volkonskiy: (y)
- [18.30.05] Kim Peart: Mighty Clap!!!
- [18.30.36] Bahadır Hilmi ALPER: (clap)
- [18.30.47] Adriano Autino: thank you very much, friends, you warm my heart
- [18.30.48] Neda Ansari: Standing ovation.
- [18.31.12] Dr. Feng Hsu: space renaissance is a new ideaology which must replace socialism and capitalism all together....SRI is not just about space, it's about sustainable human development and survival....
- [18.31.18] Sergio Lebid: Excellent Adriano!!!
- [18.32.56] G B Leatherwood: You've given us a lot of new and wonderful stuff to think about, Adriano. Now how do we make it happen?
- [18.33.03] Scott Brown: Well done
- [18.33.15] Arthur Woods: (y)
- [18.34.03] Kim Peart: Strategically Gail, win the hearts and minds of 10 million people in ten years
- [18.34.50] Adriano Autino: it is our duty, in this congress, to decide the very first steps we shall move
- [18.35.13] Adriano Autino: starting from where we, the SRI, are now
- [18.36.18] G B Leatherwood: OK, folks, we're running behind and I don't think Adriano has finished proposing what we do about what he's just said. Adriano?
- [18.36.46] Adriano Autino: yes, i was just waiting for some comments incoming
- [18.36.56] popov.alain: how about translating sbsp in as many languages as possible in wikipedia ?
- [18.38.07] Neda Ansari: Translation of SBSP - excellent idea.
- [18.38.45] popov.alain: just look how poorly it is done on all the earth languages
- [18.38.53] Kim Peart: Connect SBSP with any move to deal with Earth problems - Geoengineering to deal with climate change, for instance
- [18.39.04 | Edited 18.39.13] Adriano Autino: [18.36] popov.alain:

<<< how about translating sbsp in as many languages as possible in wikipedia ?maybe making the Space Renaissance International voice on wikipedia would be a good thing too

- [18.39.05] popov.alain: spanish lead on this one
- [18.39.41] popov.alain: of course linking the concept to as many ideas as pissible
- [18.39.50] popov.alain: possible sorry
- [18.39.59] Sergio Lebid: At this point in history the masses are programmed by viral propaganda vis-avis, for example, YouTube, which gave birth to the likes of "justin bieber", etc...Our message to the masses globally must go viral
- [18.40.05] popov.alain: and with pictures
- [18.41.03] Adriano Autino: ok, let me turn the last two slides, then we will open the discussion
- [18.41.22] SpaceShaft: Adriano it all sounded very inspirational, but I have some reservations regarding how to gather the fundings by the methods you suggest, for dure they are incompatible by the current objectives of the majority in the US congress (GOP). And regarding the EU, from my perspective they pretty much follow the US guidelines with historical delay od some years. Without going to far look at the complaints expressed by Secretary Gates regarding the EU investment in defence. If investing in defence is so affected by indifference what about other common goals? I do simpatize with seeking the political and financial support of individuals, political minorities and organizations (eg: greenpeace, development org., etc.). But the real thing is to find fundings for the SR Int. right otherwise ... ?
- [18.41.34] Dr. Feng Hsu: sorry my connection was lost ....
- [18.41.38] Sergio Lebid: Yes Adriano, SRI on wikipedia and every conceivable viral news proliferation...
- [18.42.46] G B Leatherwood: If I had a big gavel I'd be banging it so Adriano could finish his presentation. BANG! Adriano has the floor, please hold further comments until he finishes.
- [18.43.27] Adriano Autino: thank you mr. chairman



[18.44.12] Adriano Autino: ok, our strategical address, for the next four year, until 2015, should be:

Boost the most promising space industrial development lines

– Space Tourism, SubOrbital Tourism, Greater Earth region industrialization, Space Based Solar Power

– protecting life in space from hard radiations, and artificial gravity

[18.44.38] Adriano Autino: Conveying financial support to the new space industry

– stimulate the growth of a new mass space industry

– international space investment funds

– tax discounts and friendly financing

– grants and incentives to hiring young graduated personnel and experienced personnel

– support to create new kind of companies, combining cultural, philosophical and artistic concepts toward astronautical services and jobs, including virtual space habitats, where people can imagine a life outside the gravitational well

[18.45.03] Adriano Autino: what will we do?

[18.45.31] Adriano Autino: Raising the public awareness of the urgency to downsize the cost to orbit

– social-economic projects, large surveys, conferences, public events, outreach on media, new SRI website, blog

[18.46.06] Adriano Autino: our strategy for the next four years (to be better discussed tomorrow):

[18.46.23] Adriano Autino: Three Projects – exposed in Issue II

– Civilization Risk Assessment and Mitigation

– Detect the most promising space industrial development line

– Feasibility study and design of a virtual O'Neill habitat, to be settled at an earthMoon Lagrange Libration Point

[18.47.27] Adriano Autino: when the projects will be described enough (WBS, WPD, estimation of costs), we will contact universities (a list of universities to be contacted shall be written)

[18.47.32] Adriano Autino: and then

[18.47.48] Adriano Autino: having the endorsment of some universities

[18.47.50 | Edited 18.48.00] Adriano Autino: Seeking grants and sponsors

– to seek grants from foundations

– to seek sponsors and donors

– to contact celebrities

[18.48.15] Adriano Autino: in the same time, we have to

[18.48.26] Adriano Autino: Building the Space Renaissance International

– a large membership campaign

– build the local chapters (North-America, Europe, Asia)

– creating the marketing network of the SRI affiliated entities

[18.48.47] Anton Volkonskiy: what about propulsion science. Until we have new kinds of propulsion - we will have expensive flights

[18.48.56] Adriano Autino: and, as Sergio said, a true viral campaign

[18.49.05] SpaceShaft: brb

[18.49.07] Adriano Autino: A large outreach program

– organize conferences, with the SRI president and other chosen speakers

– make a new web site, and a blog

– write on media

– speak at other conferences (such as ISDC, NSS, etc...)

[18.49.41] Adriano Autino: ok, that's all by me for today :)

[18.49.50] Adriano Autino: we provided an analysis

[18.50.05 | Edited 18.52.12] Adriano Autino: we provided guidelines for a new space policy

[18.50.12] Adriano Autino: we provided a plan for the SRI

[18.50.17] Sergio Lebid: (clap)

[18.50.47] Adriano Autino: it will be in our capabilities and initiative to realize it

[18.50.51] Kim Peart: Thanks Adriano

[18.51.20] Dr. Feng Hsu: Is it time now for comments?

[18.51.28 | Edited 18.51.40] Adriano Autino: thanks also to the other friends who worked with me to the theses

[18.52.03] Kim Peart: Space Shaft (name?) - Political decisions and corporate direction are directly influenced by people in numbers

[18.52.27] Kim Peart: Have enough people demanding action on anything and action will follow

[18.52.53] Adriano Autino: yes, Gail, I think we can open the discussion



[18.53.11] Adriano Autino: it would be better to ask the floor to the chairman

#### OPEN DISCUSSION ON ISSUE I

[18.54.30] G B Leatherwood: Yes, Feng, the floor is now open for discussion. We'll take comments in the order they've been posted.

[18.54.50] Dr. Feng Hsu: The key is a PR strategy Adriano!! We must connect SRI movement with the issues confronting the everyday lives of the general public...such as the energy shortages, climate changes, water & food shortages and Wars....or we will be seeing as irrelevant organization for the small group of space fines....

[18.55.43] Neda Ansari: Agree with Dr. Hsu.

[18.55.58] Kim Peart: Start with basis survival issues - and identify what must happen

[18.56.33] Adriano Autino: @Feng, as we will discuss tomorrow, I think project 1 (Civilization Risk Assessment) includes all of the issues you mention

[18.57.23] Walter C. Putnam: The key to getting it done is organizing on every local level. We must each begin now to publicize this views and get as many people involved as possible. That means all of us -- through Facebook, Twitter, LinkedIn and whatever other means are available.

[18.57.34] Dr. Feng Hsu: For example, we must say that the SRI is a viable way to save the western or world civilization in terms of getting out of the current economic dead loop....

[18.57.49] wheatsheaf1: I'm not sure scaring humans into space will work. Probably need to appeal to profit/gain rather than demise of Earth

[18.59.02] Neda Ansari: Adriano addressed PR in the closing remarks, though - getting in touch with celebrities will go a very long way.

[18.59.13] Adriano Autino: @Walter, very well put. To multiply our efforts is key. So far very few of us were active. Very important will be if many of us will start talking in the name of SRI

[18.59.55] Dr. Feng Hsu: Yes, the scary tactics will not work, we must educate general public that space is an Ocean for resources and new economic horizons....

[19.00.04] Kim Peart: Wheatsheaf - Agree - the ultimate profit beyond a sustainable presence in space, from where we will not fall back to Earth

[19.01.02] Adriano Autino: (Kim and Wheatsheaf... the two of you are from Australia :))

[19.01.09] wheatsheaf1: so.... what is Adriano's alternative to his criticised economic ideologies? (Rob Hunt is my name)

[19.01.44] Neda Ansari: The ISDC 2012 registration form, by the way, it is held in D.C. next year:  
[https://www.nss.org/cgi-bin/register/tdregister?\\$Origin=ISDC12](https://www.nss.org/cgi-bin/register/tdregister?$Origin=ISDC12)

[19.02.09] Adriano Autino: @Rob, the alternative is exo-development, opposite to Earth-closed- development

[19.02.51] wheatsheaf1: Adriano, that's all well and good, but an Earth-based business will have to profit

[19.03.00] Adriano Autino: @Rob: recover space debris, downsize cost to orbit, industrialize the geo-lunar space region, mining NEA, build a Lagrange artificial city

[19.03.46] Adriano Autino: @Rob: the progressive business line, from Earth to space, is space tourism, starting with sub-orbital, and heading to orbital

[19.03.48] Dr. Feng Hsu: That's why I do not quite agree with Adriano about the view that if we make SBSP another commercial success like the ComSat and the telecom industry, then we have "failed"... The problem is that FAR BEFORE we make SBSP the kind of commercial success, we must have achieved LOW COST access to space and the space transportation capability and space tourism are actually closely interconnected with SBSP, agreed??

[19.03.48] wheatsheaf1: Adriano, I'm not sure that the 5500 tonnes space junk is much of an attractive proposition to develop

[19.05.01] Adriano Autino: @Feng, we would have failed if we had other 40 years filling the orbit with iron machines and NOT developing astroautics

[19.05.07] Kim Peart: Rob - if you'd like to chase up - kimpeart@inet.net.au - lobby for Australia to use resource bonanza to invest in SBSP

[19.05.20] Adriano Autino: that would be another Earth-based business, nothing more

[19.05.40] wheatsheaf1: Adriano, surely a \*tiny\* one

[19.06.07] Dr. Feng Hsu: The KEY here for a successful PR on SRI is the "Economic issue" and "Energy issue" and issues will impact the daily lives of everyone on earth!!

[19.06.20] Adriano Autino: we shall develop SBSP, but together with astronautics, not alone

[19.06.54] Sergio Lebid: @Adriano - I agree with you

[19.07.05] wheatsheaf1: SBSP is not universally supported as a good idea (is it?)



- [19.07.08] Walter C. Putnam: @Rob, we need to open new ways of looking at Earth and the Cosmos, with shared values of humanity, rather than remaining locked into philosophies from the 19th and 20th centuries -- and, obviously, many from much earlier in human history.
- [19.07.19 | Edited 19.07.29] Adriano Autino: so, my point is: let's promote SBSP, but never forget the priority is to go outside, i.e. astronautics
- [19.07.58] wheatsheaf1: @Walter - yes, but what are those ways, specifically if not economic??
- [19.08.46] Dr. Feng Hsu: Of course, together with RLV and Space Transportation and Space Tourism... let's not prioritize Space tourism, RLV or affordable access to space because they are all integral part of the SRI movement....
- [19.09.16] Kim Peart: Rob - SBSP sold as the way to mine excess carbon from the air could pay
- [19.11.03] Adriano Autino: @Rob, 5500 tons of material in orbit is a value... they are already outside the gravitational well, so they will not cost anymore 20K\$ per kg ...
- [19.11.39] Adriano Autino: @Rob, of course not all the 5500 tons can be used, only the medium big sizes...
- [19.12.01] wheatsheaf1: @Adriano, but what will we make with such a small mass of material?
- [19.12.06] Dr. Feng Hsu: SBSP is a tool in our vast toolbox for help achieving a solar civilization, so it is critically important.....that's why it is a better strategy to not prioritize these things...If we must prioritize, let put RLV as top priority
- [19.12.21] Anton Volkonskiy: we need different kind of propulsion
- [19.12.26] Kim Peart: Feng - I see SBSP as the key stepping stone beyond Earth, leading to space industry and space settlement
- [19.12.29] Adriano Autino: @Feng, agree
- [19.12.29] Bahadır Hilmi ALPER: Sorry I am new to SPACE RENAISSANCE.Does SPACE RENAISSANCE have regional coordinators like the organisation Space Generation Advisory Council(SGAC)
- [19.12.37] Anton Volkonskiy: to collect the old satellites
- [19.13.00] Adriano Autino: @Bahadır, not yet, everything is to be built up
- [19.13.01] Anton Volkonskiy: antigravity?
- [19.13.13 | Edited 19.13.49] Adriano Autino: we have many supporters, but low organization, so far
- [19.14.00] Sergio Lebid: Firstly, the SRI Race to Space PR Campaign must go viral...it must be an aggressive campaign
- [19.14.11] wheatsheaf1: All - surely the reason that Armstrong's steps were so successful was because there was a \*very\* specific goal set in a \*very\* specific time frame. We must do the same.
- [19.14.52] Kim Peart: Anton - A serious move to build SBSP at an international level would drive a galaxy of improved and new propulsion systems
- [19.14.56] Adriano Autino: @Rob, yes. I believe after Gulf of Mexico and Fukushima a key word is 'safety'
- [19.15.18] Adriano Autino: that's why I propose the Civilization Risk Assessment project
- [19.16.06] Walter C. Putnam: @Rob, For starters, those in this forum must share many of the same values and goals for space initiatives. The primary task is to bring others into this sphere of thinking. As you can see, as soon as we agree on something -- the goal -- we immediately get bogged down in debate over the details. So, we have to keep getting back to the common goal.
- [19.16.37] wheatsheaf1: SRI needs to be seen by the general human public as having a very tightly defined goal and timeframe, else it will be seen as fringe
- [19.16.46] Kim Peart: Anton - I would appreciate any evidence that "antigravity" as a propulsion system is possible
- [19.16.47] G B Leatherwood: I have to stick something in here. On P. 3, under "Summarizing the SRI (near term) strategy" the first priority is "downsizing the cost to orbit." Without that, no SBSP or anything else.
- [19.16.48] Sergio Lebid: @Walter - exactly!
- [19.17.17] Sergio Lebid: @Gail - exactly!
- [19.17.35] Dr. Feng Hsu: I fully agree with Kim: Anton - A serious move to build SBSP at an international level would drive a galaxy of improved and new propulsion systems
- [19.18.04] Bahadır Hilmi ALPER: As it mentioned before translation into other languages is a good idea.I can make the Turkish translation of the documents on SBSP.
- [19.18.07] wheatsheaf1: All - so are we all agreeing that drastic reduction in cost to orbit is our clear goal?
- [19.18.19] Krahazik Dragon: yes
- [19.18.30] Kim Peart: Roib - we could work on that by setting an example in Australia
- [19.18.34] Sergio Lebid: yes
- [19.18.42] Adriano Autino: @Feng, and Kim, be careful with that confidence, the telecommunication business was run with spendable rockets, and made everyone happy for years...
- [19.18.58] Bahadır Hilmi ALPER: And also the translation of the documents on SRI
- [19.19.22] Adriano Autino: [19.18] Bahadır Hilmi ALPER:  
<<< And also the translation of the documents on SRI



Great!

[19.19.26] Walter C. Putnam: Yes, Rob. It's sort of like the U.S. healthcare debate. Regardless of how we pay for it, unless the costs come down it will break us.

[19.19.29] wheatsheaf1: All - can we break down the "lowering cost to orbit" goal into smaller achievable sub-goals?

[19.19.34] Dr. Feng Hsu: I would like to share a paper by my India friend about making SBSP a G20 issue....SBSP is perhaps the only economic issue will catch the G20 attention, I wish Space Tourism would as well but the G20 would not give a dime - too hard for them to understand the reasons behind, but ENERGY will do it !!!!

[19.19.40] Neda Ansari: I'll translate SBSP to Persian.

[19.20.23] Anton Volkonskiy: I have conducted some experiments on antigravity, but didn't have enough equipment - nobody believes it, but my device lost 200% weight of its active zone. It didn't fly, but it seemed to be very possible...

[19.20.53] Dr. Feng Hsu: Great Neda, you are my hero!!

[19.21.12] Bahadır Hilmi ALPER: Maybe we can form a translation team together that would be more organisational

[19.21.26 | Removed 19.24.31] Neda Ansari: This message has been removed.

[19.21.38] Bahadır Hilmi ALPER: :)

[19.21.45] Adriano Autino: [19.21] Bahadır Hilmi ALPER:

<<< Maybe we can form a translation team together that would be more organisational

Excellent idea, google groups are good for that

[19.21.58] Sergio Lebid: @Anton - Excellent! My group and I are also going to reveal some of our discoveries by year's end...

[19.22.08] Stephanie Lynne Thorburn: Yes we need to reduce costs to orbit- space tourism will otherwise be a preserve of the elite. As a whole, more investment is needed at all levels in the space industry and a greater public awareness of the utility of space to our common future (i.e.) sustainable energy solutions that are based on space based solar power..

[19.22.33] Sergio Lebid: @Stephanie - Exactly!

[19.23.15] Dr. Feng Hsu: @Adriano, your worry about SBSP becoming another Telecom industry is not necessary because, IT IS IMPOSSIBLE to achieving SBSP comemrcilization with any ELV or EELVs, IT MUST BE RLVs ....I am a member if the Solar-high group [www.solarhigh.org](http://www.solarhigh.org) and we have been studying this economic and technical issues for the entire past year.....

[19.23.32] Anton Volkonskiy: I need to conduct some experiments in ZeroG

[19.24.18] Adriano Autino: @Feng, i am very much inetersted to know more about that, could you indicate some papers to me?

[19.24.55] Adriano Autino: (it would be a bless of God if SBSP needs astronautics to be realized...)

[19.25.12] Dr. Feng Hsu: Yes, I will.....

[19.25.14] Kim Peart: Thanks Anton

[19.25.46] Adriano Autino: Friends, let me recall something that i take of great importance, seeing the SRI experience so far

[19.26.04] Bahadır Hilmi ALPER: @Adriano Autin,nedaansari Forming a group for translation is a nice idea it will be a good start

[19.26.24] Adriano Autino: we should agree all together that we shall take initiative as SRI

[19.26.44] Anton Volkonskiy: Lets vote

[19.26.51] Adriano Autino: each one of us can of course pursue their own projects, and sue the SRI to enhance them

[19.27.10] Kim Peart: Anton - pleased to be kept abreast - another reason for space development

[19.27.19] Adriano Autino: but very important is that each one of us start taking initiative as a SRI member

[19.27.32] Dr. Feng Hsu: If we talk about economic impact to human development on earth or in space, SBSP should be a top issue on the SRI agenda....simply because RLV and space transpoartation is the No.1 obstacle humans must overcome for any commercial applications....

[19.27.46] Stephanie Lynne Thorburn: As as whole, I would like to take the opportunity of congratulating Adriano and the many industrious members of the SRI at all levels on what has actually been achieved in a relatively short space of time within the Space Renaissance. The organisation actually encompasses affiliations and support from a wide sector of the space industry. Progress at all levels is always difficult in times of recession and investment and improvements are always possible in an organisational sense; but the SRI always shows initiative - initiatives such as this Congress are very innovative.

[19.27.48] Adriano Autino: signing their articles as members of the Space Renaissance International

[19.28.14] Anton Volkonskiy: yes

[19.28.40] Walter C. Putnam: Yes. Agreed.

[19.28.54] Adriano Autino: when some of us speaks at a conference, say that is a member of the SRI

[19.29.15] Adriano Autino: and put a link to the SRI website on the home pages of all our websites

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- [19.29.19] Krahazik Dragon: My efforts are in developing a working PDRE system for use on launch systems.
- [19.29.22] Kim Peart: Stephanie - An international commitment to build the infrastructure of space - the SBSP stations - will deliver flight systems and tourism will be a lucrative spin-off industry
- [19.30.29] Sergio Lebid: @Stephanie - I concur with you that Adriano and others have done an enormous degree of progress with little resources!
- [19.30.36] G B Leatherwood: @krahazik: What is "PDRE?"
- [19.30.56] Krahazik Dragon: Pulse Detonation Rocket Engine
- [19.31.04] Adriano Autino: Gail, someone proposed to vote we should see if somebody wants to propose amendments however we will vote the final text only in two weeks, integrating possible amendments even during such time interval
- [19.31.08] Sergio Lebid: @Adriano - I agree
- [19.31.24] wheatsheaf1: I have to sign off and sleep - TNX Adriano, Gail and everyone - great things happening here. See you tomorrow. Rob ;)
- [19.32.00] Sergio Lebid: Good night wheatsheaf1
- [19.32.06] Adriano Autino: Bye Rob, thanks for your contribute
- [19.32.07] Dr. Feng Hsu: Dr. Kalam of former India president is a strong proponent for an International Committee on SBSP initiatives.... I may be visiting India in the next month or so, should I speak for the SRI that we support such initiative with strongest conviction possible?
- [19.32.10] G B Leatherwood: Adriano, thanks. I wasn't sure if that was a motion, and if so, what it was we were to vote on. Anton?
- [19.32.39] Adriano Autino: @Feng, wholeheartedly yes
- [19.33.26] Kim Peart: Bye Rob - hope we can catch up!!!
- [19.33.34] Dr. Feng Hsu: great Adriano
- [19.33.52] Anton Volkonskiy: that we all agree with philosophical understanding of the status of civilization and the SRI political program 2011 – 2015
- [19.33.56] wheatsheaf1: @Kim email me: rghunt@tpg.com.au
- [19.34.12] Neda Ansari: That is fantastic Feng!
- [19.34.41] Sergio Lebid: @Feng - That is great!
- [19.34.57] Keith Henson: I wish someone would do an analysis of space tourism. I have tried hard to make it work and failed
- [19.35.43] Keith Henson: the numbers just didn't work, not even when all the transport development was paid for by an sbasp project
- [19.35.44] G B Leatherwood: One moment. It has been moved by Anton Volkonsky that we agree with the philosophical understanding of the status of civilization and the SRI political program 2011-2015. Is there a second to the motion?
- [19.35.55] Sergio Lebid: I second
- [19.35.59] Walter C. Putnam: Is it OK to share this SRI document you briefed us on today. I'd like to go ahead and post a link.
- [19.35.59] Keith Henson: sure
- [19.36.24] Kim Peart: Feng - I was reading that the NSS was working with folk in India to develop SBSP
- [19.36.37] G B Leatherwood: It has been moved and seconded as stated. Is there further discussion?
- [19.36.37] Adriano Autino: the whole paper is on the sri website, i'll give you the link...
- [19.36.42] \*\*\* Dr. Feng Hsu sent Non\_Profit\_IPPP\_Foundation\_for\_an\_International\_SSP\_Mission[1].doc \*\*\*
- [19.36.57] Keith Henson: unfortunately I don't think it is strongly connected to the real world of available technology and economics
- [19.37.03] \*\*\* Dr. Feng Hsu sent Strategic\_Development\_SSP\_with\_Feng\_06-15-2011[1].doc \*\*\*
- [19.37.35] Adriano Autino: sorry, let's pay attention to the chairman
- [19.37.43] Adriano Autino: then we can exchange files
- [19.37.59] Dr. Feng Hsu: Yes, Kim but very little progress has been made so far. NSS is a US centric organization so it's vision are somewhat limited.....
- [19.38.32] Stephanie Lynne Thorburn: 'The status of civilisation' I read and agree with a majority of; but the philosophical observations are subjective essentially. The SRI political programme is more policy based and contains some evocative goals to work towards, both organisationally for the SRI and in terms of space advocacy.
- [19.38.36] G B Leatherwood: There is a motion on the floor. Any discussion must relate to that motion before any other discussion will be recognized.



## VOTING ON ISSUE I

- [19.39.21] Adriano Autino: please, could you restate the motion?  
[19.41.17] Anton Volkonskiy: we agree with the philosophical understanding of the status of civilization and the SRI political program  
[19.41.30] G B Leatherwood: The motion is: It has been moved by Anton Volkonsky that we agree with the philosophical understanding of the status of civilization and the SRI political program 2011-2015.  
[19.41.47] Keith Henson: feng, that's not the biggest problem with NSS  
[19.42.18] G B Leatherwood: Keith, you're out of order. Please hold that discussion until after the vote.  
[19.42.20] Keith Henson: do you want us to indicate agreement?  
[19.42.52] Walter C. Putnam: second the motion  
[19.42.59 | Edited 19.43.17] Adriano Autino: say AYE or NAY  
[19.43.14] Stephanie Lynne Thorburn: What are the key areas being outlined in the document for agreement?  
[19.43.27] Kim Peart: Agreed Gail - ammendments can happen as new information arrives  
[19.43.51] Walter C. Putnam: Aye  
[19.43.53] Julio Gonzalez: aye  
[19.43.58] Anton Volkonskiy: aye  
[19.43.59] Kim Peart: YES  
[19.44.01] Sergio Lebid: AYE  
[19.44.04] Nebojsa Stanojevic: aye  
[19.44.04] Adriano Autino: @Stephanie: the ones recalled in my today's presentation  
[19.44.14] Sean Con: aye  
[19.44.15] Keith Henson: ave, though I think it is not particularly influential  
[19.44.26] Keith Henson: any nays?  
[19.44.32] Neda Ansari: aye  
[19.44.52] Adriano Autino: i don't vote since it was my paper  
[19.45.05] Jennifer Bolton: aye  
[19.45.21] G B Leatherwood: Seems that we've already voted, so are there any "nays?"  
[19.46.03] G B Leatherwood: Hearing none, the "ayes" have it. Voting is closed.  
[19.46.17] Kim Peart: Great!  
[19.46.36] G B Leatherwood: We are nearing the end of our time, so is there any further discussion? Adriano? What about tomorrow?  
[19.47.05] Walter C. Putnam: Good work, Mr. Chairman. Visionary leadership, Adriano.  
[19.47.06] Adriano Autino: I promised the link of the Issue I to Walter, here it is:  
[http://www.spacerenaissance.org/SRIC/SRIC\\_ISSUE\\_I\\_the\\_SRI\\_program\\_2011\\_2015.pdf](http://www.spacerenaissance.org/SRIC/SRIC_ISSUE_I_the_SRI_program_2011_2015.pdf)  
[19.47.11] Kim Peart: Keith - Space tourism will skyrocket - especially for long stay - with the constuction of an Earth-gravity orbotal space settlement

## ADJOURNING AND FINAL FREE DISCUSSION

- [19.47.41] Adriano Autino: tomorrow we will discuss the three projects  
[19.47.56] Kim Peart: Excellent!  
[19.47.57] Keith Henson: it's just opinion . . . I think it is harder to get a space group going today than it was back in the 70s  
[19.48.00] Adriano Autino: here's the paper  
:[http://www.spacerenaissance.org/SRIC/SRIC\\_ISSUE\\_II\\_Three\\_Projects.pdf](http://www.spacerenaissance.org/SRIC/SRIC_ISSUE_II_Three_Projects.pdf)  
[19.48.14] Stephanie Lynne Thorburn: Yes, I liked the summary of SRI strategic goals in the Issue I paper Adriano.  
[19.48.38] Dr. Feng Hsu: aye  
[19.50.38] G B Leatherwood: Keith: Having been an active member of NSS for several years (Chapter Projects Coordinator, for one thing) and having written about space tourism and SBSP for nearly 10 years, I'd have to say the big chore today is getting all the space advocacy groups to work together, share resources, and speak with a single huge voice to the public and the political establishments of all our countries.  
[19.51.44] Adriano Autino: @Gail, excellent!  
[19.51.46] Neda Ansari: This was an excellent session. Thanks everyone!  
[19.51.55] Julio Gonzalez: (y)



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- [19.51.57] Kim Peart: Kieth - Post Apollo was a hum - with O'Neill offering space boots that anyone could wear - now any space group that hopes to beat 10,000 members must connect with the Earth and human needs of this time in history and sell the reason "Why?"
- [19.52.55] Sergio Lebid: @Gail - Absolutely!
- [19.53.01] Adriano Autino: Mr. Chairman, thank you a lot for your excellent chairmanship and thanks everybody for the intense and productive participation!
- [19.53.10] Dr. Feng Hsu: The problem I think with NSS is that it hardly criticize the government or the space agency....
- [19.53.18] Anton Volkonskiy: ерфтл нщг фдд
- [19.53.24] Anton Volkonskiy: thank you all
- [19.53.25] Sergio Lebid: Great work Mr. Chairman!
- [19.54.13] Dr. Feng Hsu: It seems to me that everything the space agency do or say will be supported by the NSS anyways, so I suspect the independency of the NSS....
- [19.54.16] Sergio Lebid: Thank you All!
- [19.54.28] Keith Henson: feng it's much worse than that
- [19.54.48] Neda Ansari: That's why SRI is here :)
- [19.54.51] Dr. Feng Hsu: I hear you Keith....
- [19.54.56] Keith Henson: Near as I can tell there isn't anyone in NSS who can tell a good idea from a bad one
- [19.55.11] Sergio Lebid: @Neda - Yes!
- [19.55.26] Dr. Feng Hsu: Great Neda, we should make SRI the organization to make good things happen!!
- [19.55.44] Keith Henson: or understands the physic for how to figure out the difference between good ideas an impossible ones
- [19.56.17] Sergio Lebid: @Keith - logical thought process must prevail
- [19.56.18] Keith Henson: that's the people who are in charge
- [19.56.39] Keith Henson: there are a few who do understand the physics and economics, but they don't contribute
- [19.57.14] G B Leatherwood: Also, keep in mind that NSS is not the only numerous, vocal, and influential group out there. There are some good people in NSS and some who didn't graduate first in their class as well--just like any other organization--except SRI, of course.
- [19.57.47] Keith Henson: hmm
- [19.58.28] Keith Henson: NSS I suppose could be influential, but I can't think of a case for a long time where it was
- [19.59.31] Neda Ansari: It was great to see Dr. Globus, an active SRI member hand out the NSS-NASA Student-designed space settlement award to an Indian team at the Gala at ISDC. That's when it materialized we as a civilization are making great strides. SRI's doing awesome.
- [20.00.07] G B Leatherwood: It's time to close and I want to thank everyone for their participation, patience, and imagination. We'll meet again tomorrow, same time, same station. Any closing words Adriano"
- [20.00.29] Keith Henson: sigh. I have been following that sort of studies for decades and from what I saw at the SMF
- [20.00.34] Stephanie Lynne Thorburn: SRI has indeed already made much progress as a democratic organisation.
- [20.01.37] Keith Henson: things have been getting more and more disconnected from reality
- [20.02.19] Kim Peart: The real power is at the grass roots - with the people - connect with the people with a vision that is real to the people and delivers survival, prosperity and creativity - and an organisation can be very strong
- [20.02.38 | Edited 20.02.52] Adriano Autino: Astroanut Friends, I am very happy of our Congress Day 1!  
It is not easy to run a conference using only the web resource, and i think we are maybe pioneers in the web democracy, as well as in the human expansion into space !
- [20.02.40] Keith Henson: they no longer even consider the problem of waste heat in growing food
- [20.03.06] Keith Henson: or for that matter, the difference between growing lettuce and wheat
- [20.03.20] Nebojsa Stanojevic: congrats to all, and 'see' you tomorrow same time
- [20.03.20] Dr. Feng Hsu: Thank you all for the wonderful meeting today and it's my great pleasure to discuss with all of you! See ya all tomorrow!
- [20.03.46] Anton Volkonskiy: bye all
- [20.03.55] Anton Volkonskiy: see you tomorrow
- [20.03.58] Arthur Woods: Thanks all and goodbye.