



SPACE DEBRIS REMEDIATION TERMINATORR PROJECT

Preliminary presentation

www.space-debris-remediation.com

www.glycanspaceXR-agency.com

The problem of the threat of space debris began in 1979 with the work of Dr Kessler (Adviser to NASA) who highlighted the major risks of the uncontrolled increase in the putting into orbit of tens of thousands of satellites in qualifying this situation as a syndrome.

For 10 years the number of satellites in orbit has posed serious problems including among astrophysicists and we can consider this problem as a very serious threat in the medium term 2 to 5 years and requires not to set up a TASK FORCE in the best deadlines.

The promoters and intervenor could be non-exhaustive list (NASA-JPL-FAA-FCC-DARPA-LOOKHEED MARTIN-NORTHTRUP GRUMMAN-IARPA-DoD-DoE, ESA, and commercial launchers like SpaceX and Blue Origin (Kuiper), ULA, others.

It is not useful to describe the possible catastrophes that would represent multiple collisions in the cloud of active or inactive satellites but also irreversible collateral damage for the International Space Station ISS., with losses investment 90 \$BN and casualties, and deaths., and termination of scientific programs.

Our international civil and military communications network would be seriously compromised.

Regulatory agencies including FAA-FCC are trying to control the commercial enthusiasm of launchers, but commercial projects are more and more ambitious and are currently developing projects called MEGA CONSTELLATIONS which plan at least over a few years to put 50,000 satellites into orbit.

Currently there is no serious scientific or technological method that could begin the job of dealing with problematic satellites despite strong marketing. Suggested methods we cannot credit for:

- Nets
- Harpoons
- Tongs
- Lasers
- De-orbiting
- On site servicing Tethers International unlimited (interesting for specialized capture)

All the methods proposed in the end aim to return this wreckage or debris to Earth.

Earth is not a single-use trash can.

However, these technological players could all help us to detect and capture problematic satellites and therefore federate our efforts and then definitively finish the job with TERMINATORR on place in complete safety.

For some technicians who want to destroy using Lasers (ground) or on place with these thermal means, we consider this method will generate 10 to 100 times more small debris more dangerous than large debris and therefore the remedy will be worse than the disease (this method comparable to that of Russian roulette), will not solve any problem but increase them!

It is enough to carry out this experiment on the ground in a tunnel wind low velocity and to treat a dummy assembly in Aluminum-Magnesium-Titanium etc and thus to measure the collateral effects of these radiative pulses on the size of the base targets and of the products resulting from the pulses lasers.

For the Re-fuel of Orbit satellites, the technologies do not yet exist in 2021 because the satellite manufacturers have not foreseen these (onboard options) which also pose other feasibility problems.

Artificial Intelligence should be able to be part of the specifications of commercial launchers in the future.

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BE PART OF THE PROJECT BE AN INVESTOR, BE A PARTNER

THE PROJECT IS SUPPORTED BY IP INTELLECTUAL PROPERTY

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SMART CONTRACTS BLOCKCHAIN PLATFORM FRACTIONNAL OWNERSHIP LEDGER TECHNOLOGIES (DLT) ? PATENTS VALUATION

https://1drv.ms/b/s!ArFTI-zU4KFNguV1JZYntMx6av455A?e=W30jku

Portfolio of IP Intellectual Properties 2017-2020 -

USA- Luxembourg-Europe-China-India-Israel-Japan-Russia



SPACE DEBRIS REMEDIATION TERMINATORR project INTANGIBLE ASSETS (IA)20-30 \$BN 2025-2035 https://1drv.ms/b/s!ArFTI-zU4KFNguEnjFiYInCKhz1RAg

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EXTRATERRESTRIAL MINING AND REFINING PERT PROJECT

INTANGIBLE ASSETS (IA)

2025 20-30 \$BN 2035 250\$BN 2040 2040 10 Tr US\$ www.GlycanSpaceXR-Agency.com



Note of the author and owner of the patents granted or to be granted

The plasma machine TERMINATORR has been granted, important technical information is available on demand under MOU and NDA.

The TERMINATORR Technology is the only tool who can treat on place the inactive-defunct-satellites or problematic satellites or debris without any risk of contamination of the planet, mainly by re-entry or by the failure of DE-Orbiting operations or capture operations.

The future MEGA CONSTELLATIONS of satellites (20'000 min) will increase the risk of cloud catastrophe if the space community do not possess countermeasures to fix the risk.

The Extraterrestrial Mining and Refining (an other future file – Public Offer) will generate huge ROI, but the security of clouds around the Earth must be completely organized for the ROI the choice of ASTEROIDS is highly important, some of them are with potential values of quintillion US\$!



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GLOBAL VISION OF THE PROJECT

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SHARES
Unity value of one share ($)
Total emission value ($)
Number of shares available (
GLOBAL OFFER
FOR PUBLIC INTEREST
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This document is not established in order to SALE the IP (Intellectual property) but to LICENSE the patents, some spinoff(s) under R&D are not under the public offer. When these R&D projects (spinoff will be achieved) the actual investors will the get opportunity to invest.



TERMINATORR TH3 Project

Preliminary note:

In order to treat rapidly the Space Debris Menace 2021-2025 the project will need 10 TERMINATORR plasma Machines located at the good orbitals – Large space debris population 2'000 pieces.

Small debris population 500'000 pieces or more (< 5 mm) (highly dangerous)

TERMINATOR mission will be help by others companies. Detection and capture of the debris in order to be terminated by TERMINATORR STATION TH3

Several general documentations are delivered as references at the end of this sample (historical TERMINATORR) as one drive links

BUSINESS PLAN 2021

TERMINATORR will be located in USA abandoned base USAF VDB CA (but some part of the process might be transferred) to others places.

ROAD MAP and GOALS

FINANCIAL NEEDS FOR THE REALIZATION OF THE FIRST PROTOTYPES

THREE prototypes

The final diameter is 3 meters and 10 meters length



But the embarked prototype might have the diameter of 1 meter.

The dimension of 1 meter diameter can be easily launch by conventional launchers ULA-SPACE X-BLUE ORIGIN.

The assembly of several cylindrical section 1 meter will be under ROBOTICS mission already organized and supported at ground

Facilities -technical materials-assays-ENERGIES embarked (WATER- rare gases-fuel cells-H2/O2 for propulsion)

FINANCIAL NEEDS 30 MUS\$ ROBOTICS 10 MUS\$ Total 40 MS\$ approximative (40-60 MUS\$)

Note:

The marketing revenues for TERMINATORR will be organized with the following partners, in order to secure the TERMINATORR pTH3 project as well as

- Private agencies NON PROFIT corporations
- Gov and security and regulation Agencies
- Contracts with the commercial community working for

MEGACONSTELLATIONS projects



MARKET SIZE

It's difficult to get good numbers for the market offered to investors working with good and secured methods in order to clean the space from Space Debris. It seems obvious that the GOV and regulations agencies approved at 2025 special taxes to Launchers companies and to the owners of satellites fleet. These taxes will be directly dependent of the risky situation and conjunction events detected or unfortunately occurred.

With the MEGACONSTELLATION construction the value of the market of decontamination might arise at several billions of US\$.

The collateral goal is the protection of the **ISS station** from conjunctions (<u>the space FENCE developed by LOCKHEED MARTIN</u>) at detection level will be a powerful tool in order to protect EARTH and scientific and commercial space community.

For investors the ROI will be calculated in order to secure investors taking active and financial part of TERMINATORR TH3 project but at first glance the ROI will be positive and therefore comfortable (x 10/ financial needs (40 – 60 MUS\$) and revenues 600 MUS\$.

In conclusion of this preliminary note, the project is valuable at different levels (scientific -technical) and commercial For the ROI the part of GOV agencies and GRANTS will be considered to be added to the revenues (contracts) for the moment unknown.

Remarks regarding competitors :

Several companies are working on different methods (De-orbiting- capture with tongs -harpoons- nets- lasers-tethers Some of these methods(ONE SHOT) are risky because the option of RE-ENTRY in the Earth atmosphere is planned by these companies -But nobody can secure these operations, because we are obliged to say when the debris are captured (WHAT NEXT)? how to terminate these captured debris? in order to evacuate definitively the risk.

The re-entry is risky for the planet and can contaminate the Earth! Indeed we say congratulations to these companies working for planet security, but as it's an emergency we need to consider other scientific methods in order to work and be at safe. To be continued 2020-2021. Author Dr Christian Daniel Assoun physicist

