

ON COLONIZING MARS

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COMMUNICATION SKILLS 1
ASSINGMENT 1

Why and how are we going to achieve this as a species? For many years NASA and several private companies have issued they interest on going to Mars. This work will explore SpaceX's proposal, while being compared to Nasa's projects. A public-private collaboration is a possibility in the future, and it also will be discussed. SpaceX is characterized for a rapid and cheap manufacture of rockets, and by having ludicrously ambitious goals. Born a decade ago, currently it leads space industry and was founded to ultimately help to build a "self sustaining civilization on Mars". A new system design, headed by a humongous rocket, encoded as BFR (Big Falcon Rocket), is due to be ready on less than a decade and will be evaluated in detail. This system implements new technologies, such as full reusability, In-Situ Resource Utilization (ISRU), refueling in orbit, high mass and volume capabilities, and a light, powerful and multiple-purpose rocket. Feasibility of a far future colonization of Mars and terraformation is discussed from a technical point of view and it is concluded that the reasons to promote it are ranged from practical to close to the spiritual.

The technologies applied to BFR are detailed and determined to be more budget-focused than physically required per se. These provide a 10000% reduction of the cost it would require an Apollo-type mission, a necessity to match offer and demand of an average person buying a trip to Mars, but also compulsory to enable investment to be sufficient. Statistical calculations determine that a backup planet is necessary for a likely case of global annihilation. Five ways to terraform are modeled and defined as physically reachable, all of them meaning the first step of a widely-expanded human civilization in the solar system and beyond. Furthermore, a more profound reason to colonize Mars is argued, which is providing humankind with an inspirational project that gets people together and diminish differences between people.