

SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FAR FUTURE (D4)  
Novel Concepts and Technologies (1)

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INSTANT STARSHIP-A REFERENCE PLAN FOR THE FIRST MANNED INTERSTELLAR MISSION

**Abstract**

The 100YSS, sponsored by DARPA/NASA put an end to the concept that interstellar travel was the realm of science fiction. Despite the fact that we are far in time and technology we are starting to consider Interstellar travel as a serious engineering possibility and suitable to obtain research financing for the first time in history. Instant Starship is a proposal plan utilizing the Star Voyager reference plan, for the first manned interstellar mission, born in the wake of the 100YSS. After careful evaluation of advantages and disadvantages of different configurations, the recommended proposal consist of a travelling settlement on a deflected asteroid , that properly equipped, before and during the travel, can support a generation ship crew , until its encounter with an extrasolar system. Part of the crew will occupy robotic made settlements in those systems in space or in suitable planets or satellites while the starship will keep moving to other systems to proceed roughly the same way at the next planetary system. In fact it makes no sense in reaching a system, decelerate and find a planet, like we are used from sci fi writings but to proceed to already prepared settlements and start with precise seeding plans. We will be too far from our system and we will need to be fully self sufficient and capable to build new worlds in order to stay, since coming back will not be a very feasible process. Due to the distances and the long timing involved in these missions , a manned participation can only be justified as part of a bigger challenge and plan approved and sponsored by the entire community to seed the stars. The expansion of terrestrial ecosystems in exoplanetary systems is a goal that will guarantee survival for the human species as well as other benefits that are not part of this specific theme. Instant Starship consist in the immediate beginning of the interstellar mission by rendez-vous and docking with an appropriate NEO, first with unmanned preparatory missions, later with manned ones and proceed to a step by step progress in accordance with technological advances ,until asteroid deflection system, propulsion , power generation and all subsystems mentioned above, will be ready to interstellar mission Such themes will be considered in the paper.