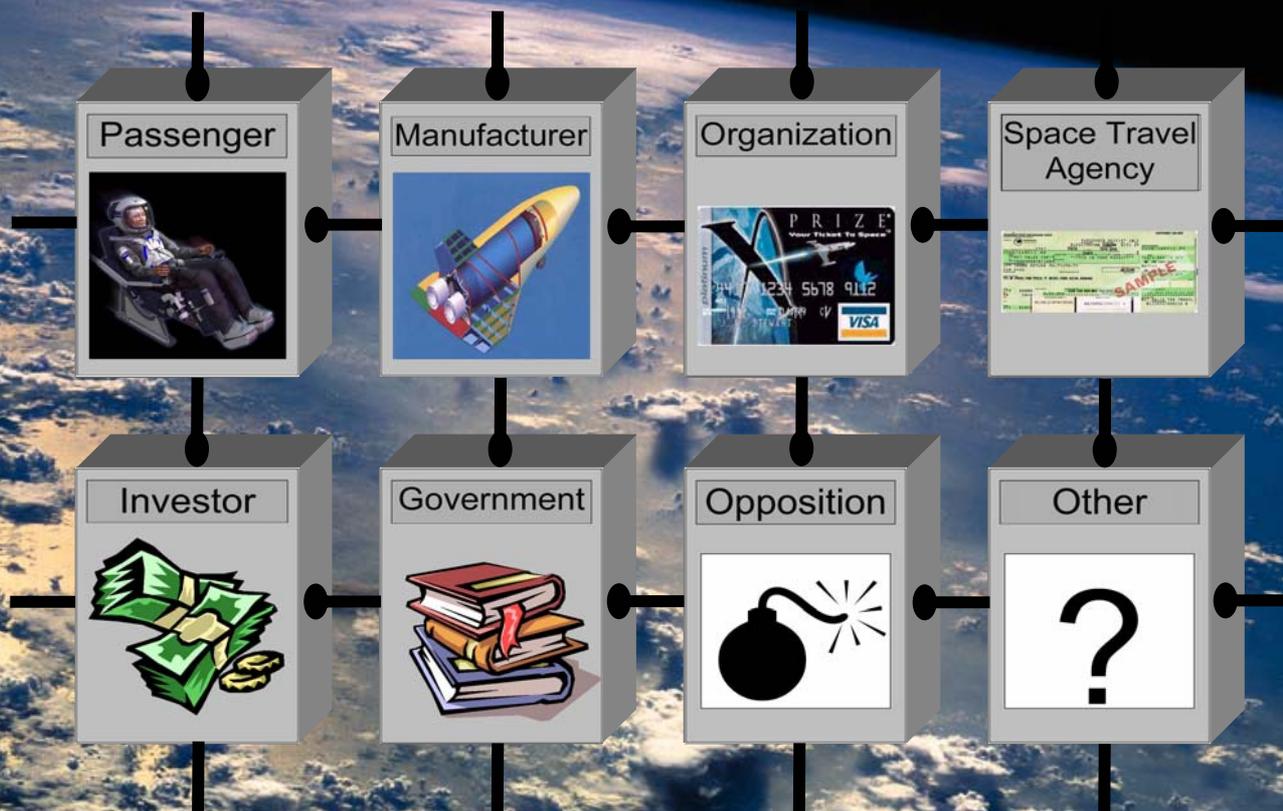


# S.P.A.C.E TOURISM™

Space Tourism Market Simulation V.2.0 by Dr. Robert A. Goehlich

## Introduction

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# S.P.A.C.E TOURISM™

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## Summary

Space Tourism Market Simulation (STMS) is an interactive simulation covering various disciplines such as rocket engineering, economics, design, laws, ethics, art, etc. around space tourism to understand and practice coherences about this topic. Participants can choose one out of eight specific groups such as passenger, manufacturer, organization, space travel agency, investor, government, opposition or own created group. They can either cooperate or compete with other groups. The idea of STMS is to improve participant's knowledge and skills of space tourism in the fields of strategic decision-making, engineering, teamwork, marketing and entrepreneurial activities.

## Goal

Winner group of STMS is that one, who could collect most "Space Dollar" (S\$). S\$ can be earned for convincing presentations, high market shares, fair play and creativity. Due to changes in the exchange rate, which is simulated by a dice, there is also a risk to loose profit.

## Group Size

Minimum number of participants is 8 plus 1 moderator. Due to the modular character of STMS, there is no limitation in maximum number of participants. Recommended size for each team is 3 participants.

## Time Frame

Minimum required time is 2 hours. Recommended simulation period is 3 months with a weekly meeting to discuss about progress and problems.

## Level

This simulation is created for all people interested in space tourism from generalists to experts. The difficulty level and quality of results is defined by the participants itself.

## Materials Needed

Minimum:	1 x STMS Info Kit for each group 1 x STMS Discussion Kit and pen for each participant
Recommended:	1 x Flip chart for each group 1 x Overhead projector or beamer 1 x Scissor 1 x Dice 100 x "Space Dollar" bank notes

**Instruction**

- Decide for one group you are most interested in to represent (Passenger, Manufacturer, Space Travel Agency, Organization, Investor, Government, Opposition or Other Group).



*Available Groups*

- Read and complete the information about your selected group which you can find in the Info Kit. Discuss within your team.

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	Team's Nickname: _____
	Team Members (Name and eMail) _____
<b>Your Profile</b> Imagine you are a rich citizen and interested to go to space. What will you do? Will you go to a space travel agency and ask for ticket prices? Will you ask the manufacturers of space tourism rockets about specifications and safety standards? Be creative! Think about what you want to know before you buy a normal air ticket, if you are not sure where to start.	
<b>Team Discussion</b> Discuss within your team and answer the following question: What are the individual main reasons you (as a passenger) are interested in? (1=primary important, 2= secondary important)	
1. _____	
2. _____	
3. _____	
4. _____	
5. _____	
<b>Questions</b> If you have any questions about this simulation please ask them here.	
_____	
_____	

(Passenger)

**Background**

As in every commercial activity, knowing customers' desires will be the secret of successful tourism in space. Market research has shown that what most people want to do in space is watch the Earth. There seems to be an endless fascination in seeing the different continents roll by, with no borders visible between countries. Just watching space is fascinating, because without the atmosphere in between, stars are much brighter and clearer when viewed.

Since suborbital trips would be fairly short (about 1/2 hour or maximal 3 hours if using a carrier aircraft), meals might not really be necessary. However, passengers would want to play with food, like drinking from a ball of water floating in the air, so some food should be provided. For orbital trips of one day, nourishment is a necessity. Playing in weightlessness like floating is something tourists would want to try, but should be restricted in vehicles with cabin dimensions which are small compared to airplanes used for parabolic flights. Being able to talk about the trip afterwards may be just as important as taking the trip itself. By going into space, space tourists would qualify for satelnet wings. Therefore, getting some kind of recognition after having made the trip would be an additional bonus.

The wish to play and eat in weightlessness can also be satisfied by parabolic flights, however the remaining wishes - watching Earth and space and receiving recognition - require suborbital or orbital flights.

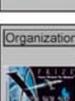
Dennis Tito can be seen as the first space tourist. His arrival at the International Space Station in April 2001 is shown in the figure.



Space Tourist Dennis Tito (NASA)

*Example: Passenger Group Information (Info Kit)*

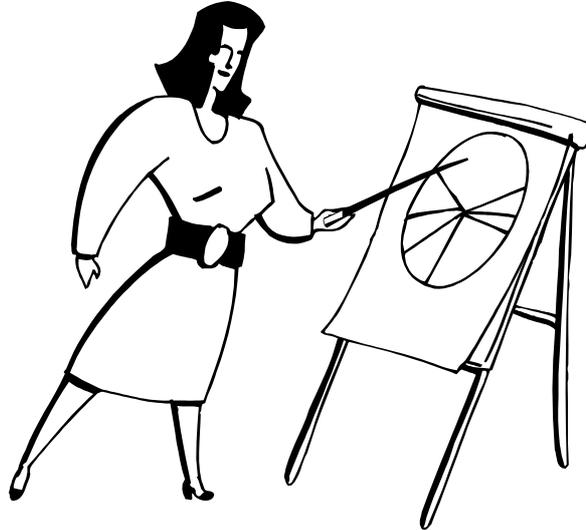
- Complete the pages from the Discussion Kit. This is a kind of mail, where you can ask the other groups about information, offers, contracts, etc.

	Team's Nickname: _____ Group Name: _____ Your questions to the group on left picture: _____		Team's Nickname: _____ Group Name: _____ Your questions to the group on left picture: _____
	Team's Nickname: _____ Group Name: _____ Your questions to the group on left picture: _____		Team's Nickname: _____ Group Name: _____ Your questions to the group on left picture: _____
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	Team's Nickname: _____ Group Name: _____ Your questions to the group on left picture: _____		Team's Nickname: _____ Group Name: _____ Your questions to the group on left picture: _____

*Question Boxes (Discussion Kit)*

Write always your group name (such as Passenger, Manufacturer, etc.) and nickname (for example: Space Tourism Union, Skyblue Aerospace, etc.) in each box because the other groups have to know who sent which questions.

4. Cut out each group question box separately. Distribute them to the other groups. Try to answer the questions from the sheets you receive and prepare a presentation.



*Presentation of your Results*

5. The presenting group receives a score from the other groups. A dice is used to determine the exchange rate from “points” to “Space Dollar”.



*Determination of Exchange Rate*