

Paving the way into virtual reality: A transition in five stages

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Introduction

The transition from the real to the virtual world plays an important role in the overall user experience. Many of today's virtual reality (VR) setups are focused on technical aspects rather than the benefits of a coherent user experience. We aim to create a holistic transitional process that is meaningfully embedded in the actual VR experience and is a journey in itself. To achieve this goal, we propose a 5-stage transition process. On a physical level, this transition offers the user a meaningful metaphor for entering a new world, mimicking a real physical translation from one place to another. On a mental level, it captures the user's attention and evokes anticipation and involvement with the final goal of engaging the user's mind in active co-creation of the experience.

Implementation & Evaluation

To validate our transition framework we are currently building a prototype of a VR interface incorporating our 5-stage transition. For our first prototype we decided to aim for a very intense experience. We want to offer "strong emotion" and ideally multi modal "intense stimulation". Having this in mind we decided to construct a flying interface entered by jumping into horizontal suspension. We found that this design choice is well suited for case study for the 5-stage model since it comprises all critical features:

- a distinct decision has to be made that is an act of will and results in a embodied action
- an intense physical translation provides rich physical stimulation
- the entire transition can be integrated meaningfully into a whole

Stage 1 - Habituate to Equipment

The first stage enables the user to become habituated to the VR equipment in a familiar environment. Wearing an HMD with an attached camera displaying the real world the user naturally interacts with the environment in the same way she did before putting on the equipment. This is especially helpful in encouraging exploration of the environment and head movement in the HMD setup.

Stage 2 - Initiate Transition

The user initiates the transition into the virtual world with an embodied action, giving her a sense of agency. In addition, by requiring effort for this initial step, we capture the user's attention and create a more compelling experience by exploiting the effort justification paradigm.

Stage 3 - Physical Translation

People have a deep-rooted expectation based on experience that a transition from one environment into another should be accompanied by a physical translation. Therefore the transition process is accompanied by the appropriate biomechanical feedback - ideally conveying the user the actual feeling of leaving the room.

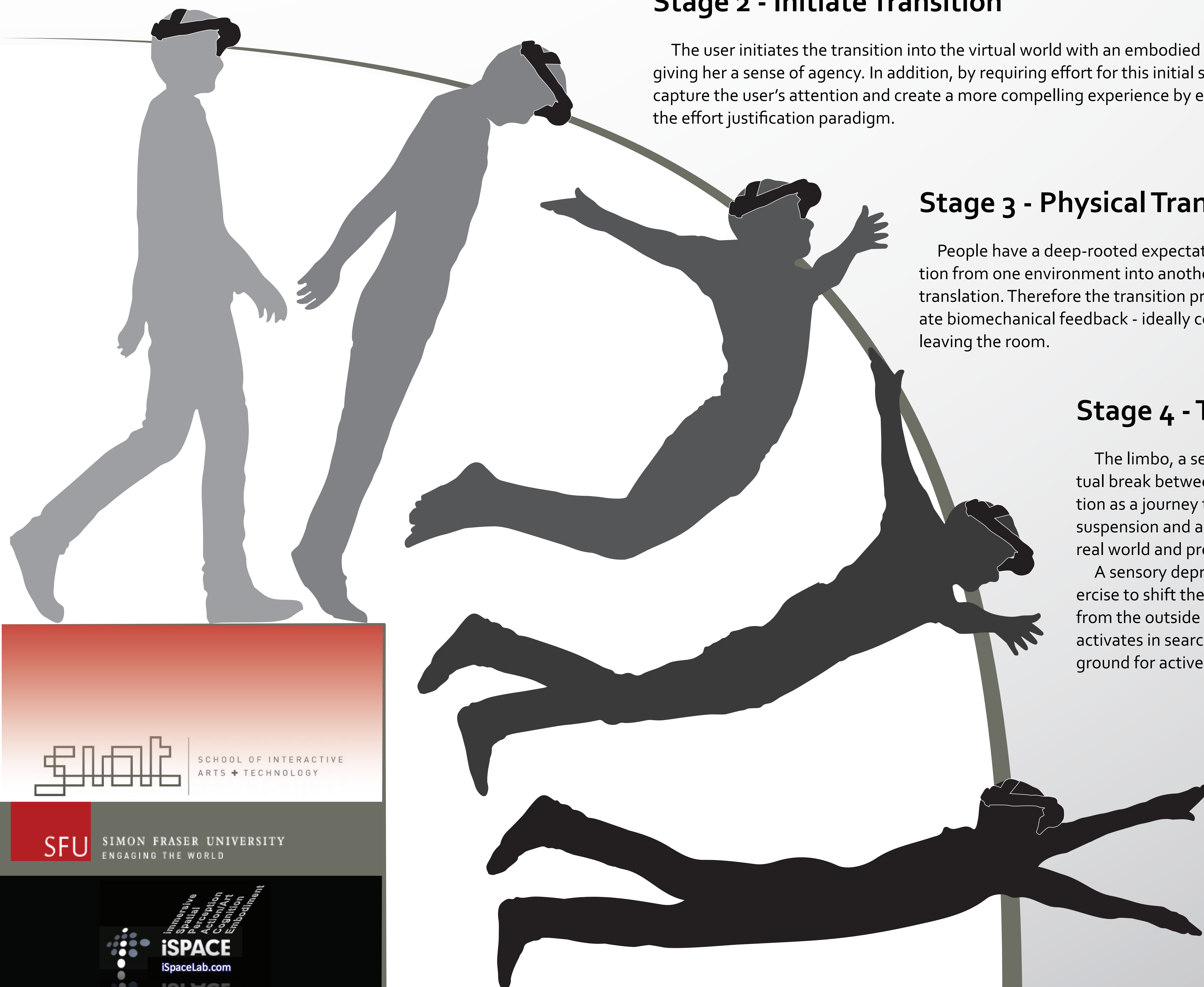
Stage 4 - The Limbo

The limbo, a sensory-deprived space between worlds, creates a perceptual break between the real and the virtual environments, casts the transition as a journey through multiple layers of time and space, and builds up suspension and anticipation. The limbo both breaks the connection to the real world and prepares the user to enter the virtual environment.

A sensory deprived environment is combined with a meditation like exercise to shift the user's focus of attention and perception inwards, away from the outside world she just "left". As time passes, user's imagination activates in search and anticipation of sensory stimuli creating a fertile ground for active co-creation in the virtual world.

Stage 5 - Entry into VR

The transition is completed by a slow fade into the virtual world. As the details of the virtual world gradually become clear, the user begins to actively actively fill the remaining perceptual gaps. Ideally, this active co-creation process continues to enhance the experience beyond the fade in process, enhancing the compellingness of the virtual environment.



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