
High-Level Technical Spec Example

All department heads at Social Climber Inc. should read this functional spec. It highlights a new product that we will develop during the year. If all goes as expected, this new product will be the first of many virtual reality (VR) exercise machines that blur the line between exercise and video games.

Synopsis

This spec details the proposed King Kong Climber 4500, which is a high-end stair-stepper machine with a digital twist. As movie fans know, at the climax of the movie *King Kong*, the great ape climbs up the outside of the Empire State Building. The 4500 will let customers enjoy a similar experience (but without fighter planes shooting at them) while getting a workout.

The key to the 4500 is a pair of VR goggles. These goggles are essentially a very, very tiny computer monitor that displays images. As a customer climbs steps on the 4500, the goggles display images from the Empire State Building. For example, when the customer has climbed the equivalent of 100 feet, the goggles will display the view from 10 stories up at the real Empire State Building.

Technology Overview

All the mechanical aspects of the King Kong Climber 4500 are identical to those of the current Social Climber 3500. In other words, both rely on the same chassis, motor, and pedals. However, the 4500 has significantly more digital components than the 3500.

The DVD of images from the Empire State Building will probably come from a company named Acrophobics' Nightmare. Our legal department is in negotiations with them.

Note that the 4500 is the first of many proposed VR exercise systems. For example, we have recently proposed a 5500 model based on multiplayer virtual races up tall buildings. Please make sure that parts suppliers understand that we are in this market for the long run.

Components

In addition to the components in the 3500, the 4500 also requires the following:

- **A Zebra-5 kit, manufactured by Dexco Unlimited.** This kit has all the digital hardware we need preassembled. It is essentially a laptop without a keyboard or monitor. Dexco is Goggleplex's preferred OEM.
- **Goggleplex Omega 20, manufactured by Goggleplex Inc.** These are the virtual reality goggles that the Zebra-5 kit requires. There are no standards for VR goggles, so there is no alternative vendor for the goggles.

- A CD containing the software to run the 4500. R&D is creating the software.
- A 15-amp power supply from any supplier. Note that the 3500 model draws only 12 amps.

Assembly

The Zebra-5 provides its own chassis. We would like manufacturing to mount this chassis at the top of the Y-bar, using a mounting mechanism to be determined by the mechanical engineering and manufacturing departments. Note the following additional assembly requirements:

- A CD must accompany each kit.
- A hard-copy documentation set must accompany each kit.

Schedule

Table 1 contains a proposed high-level schedule for the 4500.

TABLE 1 Schedule for Initial Development and Deployment of the 4500

Department	Milestone	Date
All	Detailed plans due	Jan. 7
R&D	Prototype	Mar. 5
R&D	Software development functional freeze	Mar. 26
Marketing and QA	Beta test	Apr. 27–Jul. 27
R&D	Final software development freeze	Aug. 24
QA	Internal testing on final model	Aug. 31–Sept. 30
Documentation	Final manuals printed	Sept. 29
Manufacturing	Production of 1st unit for customer shipment	Oct. 6
Manufacturing	Production of 250th unit for customer shipment	Dec. 8

Preliminary Issues

The following issues must be tracked at regular team meetings:

- How do we document safety issues for climbing stairs while wearing VR goggles?
- Do we need to license the name “King Kong” for this product?