Executive Summary of OZ Business Plan

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OZ...International believes that the successful computer applications of the 1990s will include *human interaction with simulated three dimensional spaces*. Natural simulated environments mimic or duplicate physical laws, making computer generated effects (images, sounds, remote feedback) feel natural and appealing. The OZ corporate objective is to provide real-time interactive 3D graphics with simulated physics at PC prices.

Simulated physics is highly desirable for almost all computer engineering applications, including CAD/CAM, entertainment and gaming, medical and scientific visualization, military simulation, computer-aided training, and product design. With simulated physics, we could model the trajectory of a thrown ball, the fit of two milled parts, the wear on a ball joint under various usage patterns, the behavior of a mechanical assemblage, and the operation of an carburetor.

Simulated physics is not generally available in real-time interactive models because the computations require a supercomputer. The **OZ Smart Spatial Engine** is a performance breakthrough for simulated physics and dynamics modeling, providing hundreds of times more processing power than conventional workstations, placing simulated physics within the reach of the mass marketplace.

Using proprietary technology in silicon hardware, software algorithms, and interface techniques, OZ has developed extremely efficient solutions to the critical performance problems associated with 3D graphics modeling and spatial computation. Efficient solutions to collision detection, dynamics modeling, depth-complexity in rendering, and integrated numerical, symbolic, and spatial computation make the OZ Smart Spatial Engine a supercomputer at PC prices.

These core capabilities provide the critical tools for the designer of a computer application to embed *interaction in three dimensions* within the application. We believe that this capability will be *the next dominant interface* for computers, included in all major new applications and required by all operating systems.

The OZ product line

OZ will develop a hardware acceleration board for simulated physics, and the accompanying software for dynamics modeling. The core capabilities enable your computer, in real-time, to:

* model real world physics with hundreds of dynamics objects
* detect collisions and model natural responses everywhere
* build virtual machines which actually function
* accelerate graphics preprocessing
* scale performance at linear cost
* capable of maintaining accurate physical dynamics
  for up to 1000 interacting objects, each modeled by 1000 polygons,
  at 60 Hz display rate, for $3K manufacturing cost

The OZ business plan includes extending the core technology with functional components:

* an passive sensing tool for natural behavior input
* a logic accelerator for general behavior and control structures
* a renderer for inexpensive high-end scene rendering
* an interactive spatial interface