Glossary of Terms

Actuator – A device that provides movement either rotationally, or linearly. Linear actuators are used on SimCraft Motion Sims.

APEX – SimCraft's professional product line.

Cockpit - A compartment, either open or closed, that houses the driver/pilot and all of the accessories of a sim (screen, joystick, pedals).

Craft or Vehicle – that which can be driven, steered, or piloted which also provides a mode of transport.

Craftware - SimCraft proprietary software that translates physics from your sim/game title and drives the SimCraft simulator's motion.

Degree of Freedom – A rotational or translational displacement in three dimensional space. Rotational motion, (roll, pitch, yaw), rotates around an axis in a circular motion, while linear motion, (heave, surge, sway), travels along an axis linearly along a plane. The six degrees of freedom are roll, pitch, yaw, heave, surge, and sway. Motion sims are often characterized by the number of Degrees of Freedom they provide and the range of motion on each axis.

FlightSim or Flight Simulation - The virtual recreation of aircraft. The software physics, visuals, flight control, handling, environment, training procedures, and other factors are all key components of FlightSim. The hardware motion, feel, handling, performance, precision, control, response, detail, and other factors are also components of FlightSim.

Integration (Gaming/Sim) Module – SimCraft software which corresponds to a racing or flight title. A module exists for each title compatible with SimCraft sims.

Motion Sim or Motion Simulator- A motion sim can also be called a motion chassis, a motion base, a motion platform, or a motion simulator among other things. The primary function of a motion sim is to provide realistic physical movement for one or more occupants. The movement is synchronous with visual display and is designed to add a tactile, or sense of touch, element to video gaming, simulation, and virtual reality. When motion is applied and synchronized to audio and video signals, the result is a combination of sight, sound, and touch.

Motion Simulation – The simulated motion created by the motion sim intended to replicate the dynamics of an actual craft or vehicle. The motion, derived from realtime physics and telemetry, represents the direction, speed, and forces felt on the craft during operation.

Physics or Telemetry – data, either collected or calculated, which characterizes behavior. In motorsports simulation, the physics of a real racecar, (i.e. acceleration, velocity, orientation) are emulated virtually to create a realistic dynamic in the simulation.

Primus – The codename of the project to develop the SimCraft motion sim series.

Range of Motion – The amplitude, or amount, of possible movement on a motion axis

S.T.A.R. – Some Time and Assembly Required - STAR is the original brand associated with a SimCraft motion simulator development kit. A STAR kit is now simply and more appropriately referred to as a SimCraft motion system and is comprised of the hardware, actuation, and software control components needed for a racing sim or a flight sim. The idea behind the systems is to take the hard part out of motion simulator building for enthusiasts, and leaves the building of the hardware (motion chassis) from wood, aluminum extrusions, or a tubular metal to the builder.

SimCraft Control Panel (CraftCon) – A modular SimCraft application that allow the user to manage the various Integration Modules that interact with a SimCraft Motion Sim. From the CraftCon you can manage Module settings, Motion Settings, and other features.

SimCraft DIY - The first simulator project developed by the founder of SimCraft, William Dexter MacDonald. DIY was released as an open source project in 2006 and is hosted on SourceForge.net, which consists of a manual of instructions on how to build a 2 DOF motion sim from scratch.

SimRacing or Racing Simulation – The virtual recreation of motorsports. The software physics, control, handling, visuals, track mapping, and other factors are all key components of SimRacing. The hardware motion, feel, handling, performance, precision, control, response, detail, and other factors are also components of SimRacing.

Simulate or Simulation – to imitate the character or appearance of. Simulation mimics or emulates a "real world" experience and is accomplished with hardware, software, or both in combination. Simulation is an attempted replication of something in a controllable environment.

Simulator or Sim – A simulator is a combination of software and hardware to replicate an experience. A sim is typically used to simulate flight or racing and is most effective when the sim includes full motion. Simulators and their key components can be linked to the human senses and measured against them for effectiveness and realism.

VERTEX – SimCraft's enthusiast product line.