sor **20** attached thereto, the sensor **20** configured to acquire signals from a beacon **30** associated with a lifting point on the load. Throughout this disclosure, the term "lifting device" and helicopter, crane, forklift, pallet mover and the like are used interchangeably, it being understood that the present invention is not limited to any specific load lifting and moving device, but may be applied to any load lifting device, as should be apparent to one skilled in the art. Also, the present invention lends itself well to robotic lifting and moving devices, such as remotely controlled and GPS operated helicopters, pallet lifters/movers that are operated by a computer and position sensors, automated cranes and other similar lifting and moving devices. All of these lifting and moving devices are fitted with a load lifter, which may be a hook, ring, clevis or the like. In the present invention, an automated, electrically operated grapple is provided as a load lifter attached to a load lifting device. A receptacle attached to the load serves as an attachment point, and which receives the grapple, which is locked in the receptacle.

Beacon **30** is attached in a known orientation on or near the load, which as stated, allows 6 degree of freedom information to be calculated for the lifting point, and in one embodiment to develop control signals for automatically guiding a helicopter, crane or other lifting apparatus **10** to engage the load lifting device with the lifting point.

In another embodiment, instructional signals are developed and provided to a pilot of a helicopter, or operator of a crane. A rope, chain, strap or the like **40** of a known length is attached at one end to helicopter or crane **10**, with an automated grapple **50** attached to the other end of rope **40**, as by a hook or loop **901** as shown in figure 6. A receiver **60** is configured to be engaged by grapple **50**, and is attached to a load **70** by a rope, chain, strap, net or the like **80**. A computer processor **90** receives the signals from sensor **20**, calculates the six degrees of freedom information and develops the control or informational signals to guide the automated grapple to the receiver on the load.

Sensor **20**, which may be a digital camera, is attached to helicopter or crane **10** in a position and orientation to receive signals from a load **70** generally underneath the helicopter or crane **10**. As such, the sensor field of view, which may be on the order of 15-25 degrees or so, includes an area directly

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