ture **8** though a network connection **1**, and to the control interface **13**. The network connection **1** may be for example an Ethernet card, provides the base architecture **8** with a connection to a network and the process control unit **12**, for example a LAN.

Process control unit **12** for example may be an infrared device for determining a stationary object in the path and at the sides of the airplane, for example at a range of 1000 meters.

A software driver **2** can read the Ethernet messages, strip them of any headers, and pass the relevant information to an embedded message element application **3**. The embedded message application **3** can determine, for example, that a stationary or approaching object is in the path of the vehicle and also to the right of the vehicle, based on the input from process control unit **12**.

The message application **3** then can begin flashing a proper embedded message at, for example, a predetermined intensity. For example, "TURN LEFT" is flashed on control interface **13**, embedded in the supraliminal night vision information.

If the pilot fails to respond in a predetermined time frame, the intensity of the embedded message can, for example, be increased slightly (or the surrounding intensity of the night vision screen information decreased) until a response is registered by the determination that from the sensors that the controller has been moved to the left.

If the pilot responds immediately, the intensity, or activity, of future messages can be decreased a predetermined amount.

A database **4** can store the intensity at which the pilot responded, and use this intensity as the predetermined intensity in later applications.

If an immediate response is registered the next time an embedded message is shown, the intensity can be lowered for the next embedded message.

The base architecture **8** may be a computer or other logic unit, which can include for example a processor commercially-available from the Intel Corporation.

The system thus can perform trial and error image manipulations seeking the desired response, and the system collects data for analysis in the embedded database **4** thereby learning individual sensory sensitivities and the mechanism for influencing individual users.

Moreover, the present invention can compensate for varying individual conditions, for example as the pilot becomes sleepier during a flight, the messages can be automatically intensified.

The real-time operating system **7**, for example VXWORKS, commercially-available from the Wind River Corporation, provides the sensory monitor with deterministic monitoring and measurement within the millisecond range.

FIG. **3** shows a schematic representation of the present invention for use as a training or diagnostic tool. When the present invention is used as a training tool for training routines, embedded training messages are presented to the operator **9** on a CRT, or television, with input device **13**. The training messages may be for example pictorial representation of foreign language words. The sensor array **10**, which can be a computer that queries the operator to choose the proper meaning of a foreign language word, receives the reaction of operator **9** and then communicates the results with the base architecture **8**, as in FIG. **2**.

When used as a diagnostic tool, the system measures individual sensory abilities at the edges of awareness against statistical norms as a method of detecting abnormalities within the sensory pathways as physiology abnormalities manifest in sensory abilities. The present invention provides a noninvasive means of detecting physiological changes within the brain of the operator **9** and outward sensory pathways by detecting the manifestation of physiological changes as they affect perception. When the present invention is used as a diagnostic tool, embedded messages are displayed to the operator **9** on a CRT with input device **13**. The sensor array **10** receives the operator's **9** reactions and communicates the results with the base architecture **8**.

For example, the same training technique for foreign language meaning can be used to determine a problem in the brain of an operator for learning foreign language words, as measured against statistical norms.

Supraliminal messages as defined herein can include those provided by a normal visual field of an individual, for example through a windshield of a vehicle.

FIG. **4** shows a schematic representation of the present invention for a warning system in a combat aircraft. The warning system provides embedded messages **20** (shown for clarity) embedded in supraliminal messages **22** to the pilot. The warning system in a combat aircraft increases the awareness level of the pilot without distracting the pilot from flying the aircraft. The warning system utilizes a screen **113** as a message transmitter for embedded supraliminal messages **20** to the pilot, while operating the aircraft. The display screen **113** is integrated into the instrument panel **16** of the cockpit **17**. Pilot reactions can be monitored through an aircraft controller **110** (See FIG. **5** as well).

Alternately, as shown in FIG. **5**, the embedded messages may include a symbol, for example arrow **120**, of varying intensity. The arrow **120** also can be moved from the inner regions of the display screen **113** toward the peripheral region of screen **113** (i.e. to the left in FIG. **5**), as well as having the intensity varied. Thus two gradient variables (intensity and movement) are simultaneously used to alter perceptibility of the embedded message.

Alternately, the embedded messages **20** could be directly shown on the windshield **213** of the cockpit.

What is claimed is:

1. A system for measuring human perception at edges of awareness comprising:

- a message transmitter providing embedded messages embedded in supraliminal information;
- a sensory monitor for measuring reaction in an individual to the embedded messages; and
- a control system connected to the message transmitter, the control system receiving an input from the sensory monitor, the control system including a real-time feedback control loop altering a perceptibility of the embedded messages with respect to the supraliminal messages as a function of the sensory monitor input.

2. The system as recited in claim **1** wherein the embedded messages and supraliminal messages are visual images.

3. The system as recited in claim **1** wherein the perceptibility is controlled by altering at least one of duration, frequency, movement, intensity, color and contrast of the embedded messages.

4. The system as recited in claim **1** wherein the perceptibility is controlled by altering at least one of an intensity, color and contrast of the supraliminal message.

5. The system as recited in claim **1** wherein the reaction of the individual is a predetermined input to the control system.

6. The system as recited in claim **5** wherein the reaction of the individual includes at least one predetermined hand, eye, foot or body weighting movement or a vocalization.