**O5 – Function Details**

**Introduction:**  
A simple overview of the functions that make up the O5 system. The description and examples are kept as simple and generic as possible to not limit O5. Most of the examples are given in C++ or C for ease of documentation. The author anticipates many implementations will use platforms and languages not described or used in this documentation. Function details **ARE REQUIRED** for implementations to work in the O5 system. The most important information for users and implementers of O5 is the **behavior** of the 5 base functions. Underlying details are left to the platform implementation design as long as the **behavior** of the exposed O5 functions.

Structures and data formats are detailed here to the level required for interoperability. The base requirement is that a byte is defined as 8 bits. Encoding format is open but is assumed to be ASCII based. Items described as **“required”** must be implemented as described.

**Address Structure:**  
Definition of O5 address structure. An array of 64 bytes, 16 array of 4 byte words, list of common names selected by the author.

//

// O5 Address structure

//

// Simple structure to hold the 64 bye address block.

// Dave Winters 10/2009

//

union address\_O5 {

char addr\_b[64];

int addr\_w[16];

struct {

int Reality;

int TimeFrame;

int Universe;

int System;

int Planet;

int Continent;

int Country;

int State;

int City;

int Street;

int Lot;

int Building;

int Room;

int Thing;

int Part;

int Action;

} addr\_n;

};

**FIND( pAddress, pMessage)**

**ADVERTISE( pAddress, pMessage)**

**SEND( pAddress, pMessage)**

**RECEIVE( pAddress, pMessage)**

**WAIT( pAddress, pMessage)**