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// hideAndSeek.h - HIDE AND SEEK DECLARATIONS
//
// MAINTENANCE HISTORY
// DATE          PROGRAMMER AND DETAILS
// 18-09-14    JS      Original
// 08-10-14    STT     Corrected CipherPage_t structure size
// 13-10-14    MPF     Corrected to comply with programming standards
//
//-----

// EXTERNAL FUNCTIONS

void Encrypt (const char *key, const void *plainText, void *cipherText);
                // Encrypt plainText into cipherText
void Decrypt (const char *key, const void *cipherText, void *plainText);
                // Decrypt cipherText into plainText
void GetSignature (const char *key, const void *data, void *signature);
                // Derive digital signature
unsigned char GetRandomByte ();
                // Get a cryptographically secure random byte

//-----

// DEFINITIONS

#define PLAIN_DATA_LEN    968    // Plaintext data length
#define PAGE_COPIES      8      // Number of copies of each page
#define IV_LEN           16     // Initial vector length

//-----

// PLAINTEXT PAGE STRUCTURE

struct PlainPage_t {
    uint32_t    pageNumber;    // Page number
    uint16_t    copyNumber;    // Page copy number
    uint16_t    plainSize;     // Plaintext size
    char        plainData[PLAIN_DATA_LEN]; // Plaintext data
};

// ENCRYPTED PAGE STRUCTURE

struct CipherPage_t {
    char        cipherText[sizeof(PlainPage_t) + IV_LEN];
                // Encrypted value of PlainPage_t
    char        randomData[12]; // Random data
    char        signature[20];  // Digital signature
};

```