Gateway to M4 Application Porting

* main.c
  + Move to sources/hcs12
* cdata.c
  + Move to sources/hcs12
* af\_main.c
  + Move to sources/hcs12
* af\_main.h
  + Do not move
  + Disable “void af\_main(unsigned char mode);”
    - #ifndef HCS12\_BSP\_EMU
    - void af\_main(unsigned char mode);
    - #endif /\* HCS12\_BSP\_EMU \*/
* Ap\_bservice.cpp
  + Fix definition of process\_bservice\_cmd()
    - Change “unsigned char” to “static bool” to match prototype
    - Line 240 for mex
  + Fix endianness dependency for read word and byte absolute commands
    - Line 320
    - Old code
      * uint8\_t \*p = (uint8\_t\*)&address;
      * p[0] = request->DSR[4];
      * p[1] = request->DSR[3];
      * p[1] = request->DSR[2];
      * p[1] = request->DSR[1];
    - New code
      * address = request->DSR[4];
      * address <<= 8;
      * address |= request->DSR[3];
      * address <<= 8;
      * address |= request->DSR[2];
      * address <<= 8;
      * address |= request->DSR[1];
  + Fix enianness dependency for read dword absolute command
    - Line 401
    - See previous fix
  + Change read absolute command to use new hw functions
    - Line 331
    - Old code
      * if (request->DSR[0]== 0x0E)
      * data = \* (uint16\_t \* far) address;
      * else
      * data = \* (uint8\_t \* far) address;
    - New code
      * if (request->DSR[0]== 0x0E)
      * data = hw\_readWordDirect(address);
      * else
      * data = hw\_readByteDirect(address);
* Ap\_bservice\_dv.h
  + Remove definition of NULL
    - Line 51
  + Add “#include <stddef.h>
    - Line 50
* Ap\_bservice\_prog.cpp
  + Change request for protocol cmd to return hardware specific variables
    - Line 66
    - Old code
      * response->DSR[2] = 0x01; // protocol id
      * response->DSR[3] = 0x4A; // protocol options
      * response->DSR[4] = 0x01; // customer id
      * response->DSR[5] = 0x20; // max data size
    - New code
      * response->DSR[2] = bservProg\_protocolID;
      * response->DSR[3] = bservProg\_options;
      * response->DSR[4] = bservProg\_customerID;
      * response->DSR[5] = bservProg\_maxDataSize;
* Change file extensions to cpp
* Ap\_hwt.cpp
  + Add cast to appropriate type for several function arguments
    - Line 57
    - Line 62
    - Line 76
    - Line 78
    - Line 84
    - Line 102
    - Line 104
    - Line 108
    - Line 249
    - Line 276
    - Line 282
* Ap\_version.c and ap\_version.h
  + Remove all “near” modifiers

Matlab

* Change language to C++
  + Code generation -> Language
* Enable portable word sizes
  + Code generation -> Verification -> Enable portable word sizes

MX fixes

* Ap\_deluxeG5.cpp
  + Add type for variable “flag\_TPSent” in function “send\_DeluxeG5\_StartUpData()”
    - Line 172
* Ap\_eeprom.cpp
  + Removed “asm NOP;” from function “RestoreNewEEVariables()”
    - Line 920
    - Need to add portable delay