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/*
    libxbee - a C library to aid the use of Digi's Series 1 XBee modules
              running in API mode (AP=2).

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*/

#include <stdio.h>
#include <stdlib.h>
#include <string.h>

#include "xbee.h"

int main(int argc, char *argv[]) {
  xbee_con *con, *con2;
  xbee_pkt *pkt, *p;

  if (xbee_setuplog("/dev/ttyUSB0",57600,2) == -1) {
    perror("xbee_setuplog()");
    exit(1);
  }
  if (argc >= 2 && !strcmp(argv[1],"sleep")) {
    for (;;) {
      sleep(86400); /* sleep for a day... forever :) */
    }
  }

  /*if ((con = xbee_newcon(NULL,'X',xbee_localAT)) == (void *)-1) {
    printf("error creating connection...\n");
    exit(1);
  }

  while(1){sleep(10);}

  xbee_senddata(con,"CH%c",0x0C);
  sleep(1);
  xbee_senddata(con,"ID%c%c",0x33, 0x32);
  sleep(1);
  xbee_senddata(con,"DH%c%c%c%c",0x00,0x00,0x00,0x00);
  sleep(1);
  xbee_senddata(con,"DL%c%c%c%c",0x00,0x00,0x00,0x00);
  sleep(1);
  xbee_senddata(con,"MY%c%c",0x00,0x00);
  sleep(1);
  // SH - read only
  // SL - read only
  xbee_senddata(con,"RR%c",0x00);
  sleep(1);
  xbee_senddata(con,"RN%c",0x00);
  sleep(1);
  xbee_senddata(con,"MM%c",0x00);
  sleep(1);
  xbee_senddata(con,"NT%c",0x19);
  sleep(1);
  xbee_senddata(con,"NO%c",0x00);
  sleep(1);
  xbee_senddata(con,"CE%c",0x00);
  sleep(1);
  xbee_senddata(con,"SC%c%c",0x1F,0xFE);
  sleep(1);
  xbee_senddata(con,"SD%c",0x04);
  sleep(1);
  xbee_senddata(con,"A1%c",0x00);
  sleep(1);
  xbee_senddata(con,"A2%c",0x00);
  sleep(1);
  // AI - read only
  xbee_senddata(con,"EE%c",0x00);
  sleep(1);
  //xbee_senddata(con,"KY%c",0x00);
  //sleep(1);
  xbee_senddata(con,"NI%s","TIGGER");
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  86:   sleep(1);
  87:   xbee_senddata(con,"PL%c",0x04);
  88:   sleep(1);
  89:   xbee_senddata(con,"CA%c",0x2C);
  90:   sleep(1);
  91:   xbee_senddata(con,"SM%c",0x00);
  92:   sleep(1);
  93:   xbee_senddata(con,"ST%c%c",0x13,0x88);
  94:   sleep(1);
  95:   xbee_senddata(con,"SP%c%c",0x00,0x00);
  96:   sleep(1);
  97:   xbee_senddata(con,"DP%c%c",0x03,0xE8);
  98:   sleep(1);
  99:   xbee_senddata(con,"SO%c",0x00);
 100:   sleep(1);
 101:   xbee_senddata(con,"BD%c",0x06);
 102:   sleep(1);
 103:   xbee_senddata(con,"RO%c",0x03);
 104:   sleep(1);
 105:   xbee_senddata(con,"AP%c",0x02);
 106:   sleep(1);
 107:   xbee_senddata(con,"PR%c",0xFF);
 108:   sleep(1);
 109:   xbee_senddata(con,"D8%c",0x00);
 110:   sleep(1);
 111:   xbee_senddata(con,"D7%c",0x01);
 112:   sleep(1);
 113:   xbee_senddata(con,"D6%c",0x00);
 114:   sleep(1);
 115:   xbee_senddata(con,"D5%c",0x01);
 116:   sleep(1);
 117:   xbee_senddata(con,"D4%c",0x00);
 118:   sleep(1);
 119:   xbee_senddata(con,"D3%c",0x00);
 120:   sleep(1);
 121:   xbee_senddata(con,"D2%c",0x00);
 122:   sleep(1);
 123:   xbee_senddata(con,"D1%c",0x00);
 124:   sleep(1);
 125:   xbee_senddata(con,"D0%c",0x00);
 126:   sleep(1);
 127:   xbee_senddata(con,"IU%c",0x00);
 128:   sleep(1);
 129:   xbee_senddata(con,"IT%c",0x01);
 130:   sleep(1);
 131:   xbee_senddata(con,"IC%c",0x00);
 132:   sleep(1);
 133:   xbee_senddata(con,"IR%c%c",0x00,0x00);
 134:   sleep(1);
 135:   xbee_senddata(con,"IA%c%c%c%c%c%c%c%c",0xFF,0xFF,0xFF,0xFF,0xFF,0xFF,0xFF,0xFF);
 136:   sleep(1);
 137:   xbee_senddata(con,"T0%c",0xFF);
 138:   sleep(1);
 139:   xbee_senddata(con,"T1%c",0xFF);
 140:   sleep(1);
 141:   xbee_senddata(con,"T2%c",0xFF);
 142:   sleep(1);
 143:   xbee_senddata(con,"T3%c",0xFF);
 144:   sleep(1);
 145:   xbee_senddata(con,"T4%c",0xFF);
 146:   sleep(1);
 147:   xbee_senddata(con,"T5%c",0xFF);
 148:   sleep(1);
 149:   xbee_senddata(con,"T6%c",0xFF);
 150:   sleep(1);
 151:   xbee_senddata(con,"T7%c",0xFF);
 152:   sleep(1);
 153:   xbee_senddata(con,"P0%c",0x01);
 154:   sleep(1);
 155:   xbee_senddata(con,"P1%c",0x00);
 156:   sleep(1);
 157:   xbee_senddata(con,"PT%c",0xFF);
 158:   sleep(1);
 159:   xbee_senddata(con,"RP%c",0x28);
 160:   sleep(1);
 161:   // VR - read only
 162:   // HV - read only
 163:   // DB - read only
 164:   // EC - read only
 165:   // EA - read only
 166:   // DD - read only
 167:   xbee_senddata(con,"CT%c",0x64);
 168:   sleep(1);
 169:   xbee_senddata(con,"GT%c%c",0x03,0xE8);
 170:   sleep(1);
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171:   xbee_senddata(con,"CC%c",0x2B);
172:   sleep(1);
173:
174:   sleep(10);
175:   */
176:
177:   /* test 64bit IO and Data */
178:   con =  xbee_newcon('I',xbee_64bitIO,   0x0013A200, 0x403af247);
179:   con2 = xbee_newcon('I',xbee_64bitData, 0x0013A200, 0x403af247);
180:
181:   while (1) {
182:     while ((pkt = xbee_getpacket(con)) != NULL) {
183:       int i;
184:       for (i = 0; i < pkt->samples; i++) {
185:         int m;
186:         for (m = 0; m <= 8; m++) {
187:           if (xbee_hasdigital(pkt,i,m)) printf("D%d: %d  ",m,xbee_getdigital(pkt,i,m));
188:         }
189: #define Vref 3.23
190:         for (m = 0; m <= 5; m++) {
191:           if (xbee_hasanalog(pkt,i,m)) printf("A%d: %.2fv  ",m,xbee_getanalog(pkt,i,m,Vref));
192:         }
193:         printf("\n");
194:       }
195:       if (xbee_senddata(con2, "the time is %d\r", time(NULL))) {
196:         printf("Error: xbee_senddata\n");
197:         return 1;
198:       }
199:       free(pkt);
200:       if (p) {
201:         switch (p->status) {
202:         case 0x01: printf("XBee: txStatus: No ACK\n");      break;
203:         case 0x02: printf("XBee: txStatus: CCA Failure\n"); break;
204:         case 0x03: printf("XBee: txStatus: Purged\n");      break;
205:         }
206:         free(p);
207:       }
208:     }
209:     while ((pkt = xbee_getpacket(con2)) != NULL) {
210:       printf("he said '%s'\n", pkt->data);
211:       if (xbee_senddata(con2, "you said '%s'\r", pkt->data)) {
212:         printf("Error: xbee_senddata\n");
213:         return 1;
214:       }
215:       free(pkt);
216:       if (p) {
217:         switch (p->status) {
218:         case 0x01: printf("XBee: txStatus: No ACK\n");      break;
219:         case 0x02: printf("XBee: txStatus: CCA Failure\n"); break;
220:         case 0x03: printf("XBee: txStatus: Purged\n");      break;
221:         }
222:         free(p);
223:       }
224:     }
225:     usleep(100);
226:   }
227:
228:   return 0;
229: }
```