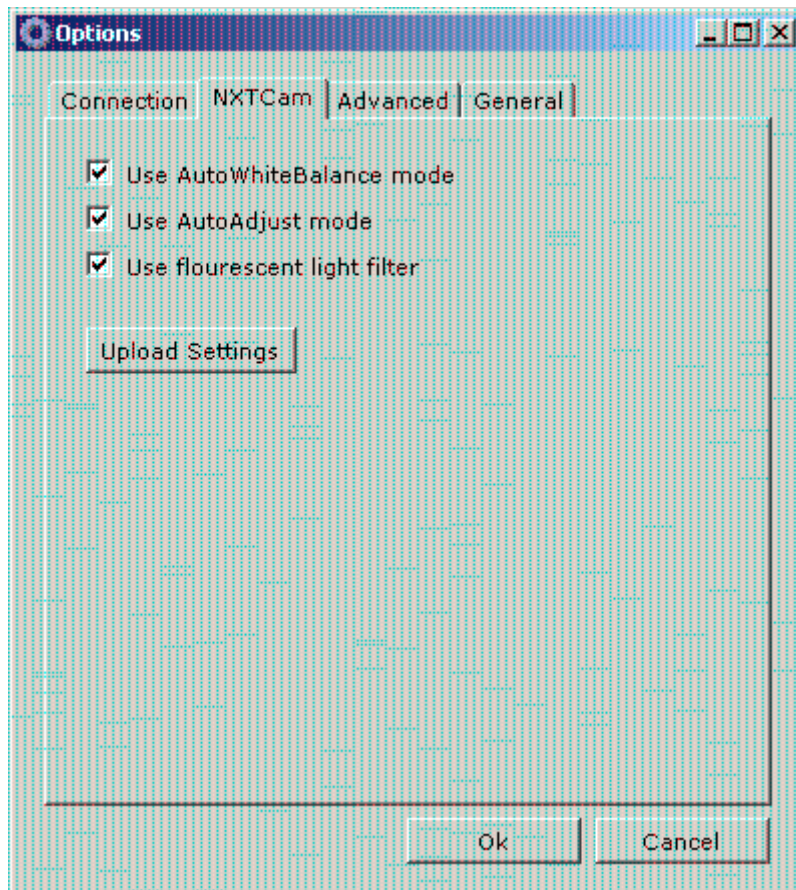


NXTCamView

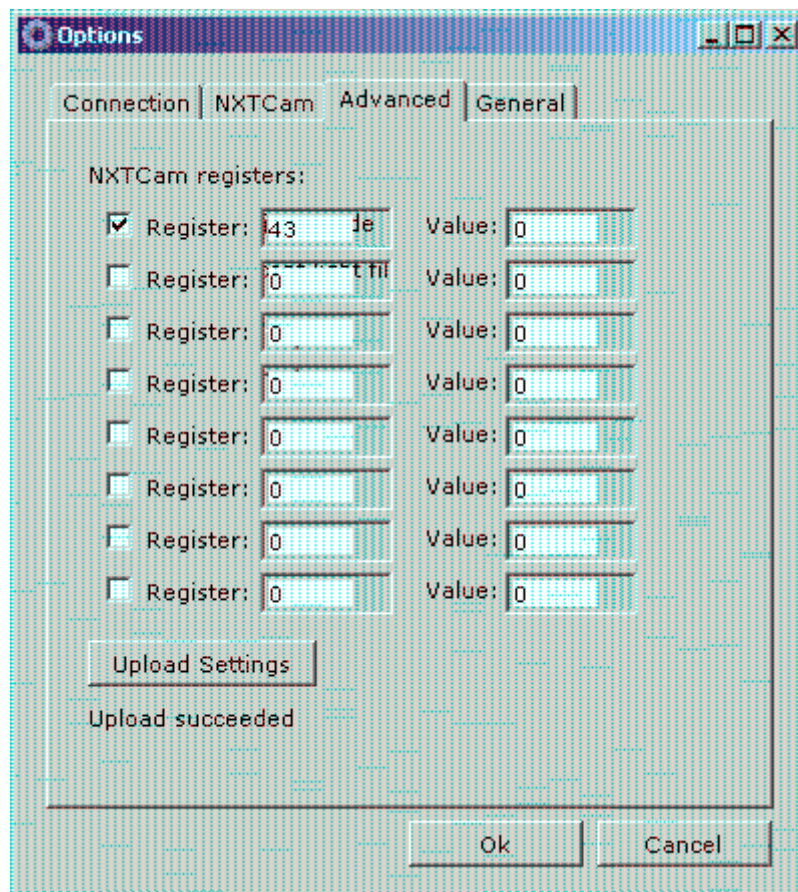
The main goal of this tool is determinate what colors are necessary to track with NXTCam sensor. When I connect NXTCam from my PC, I notice that in tool Window I have 2 tabs that I dont know how to use:

Tab1: NXTCam

Can you explain this options?



Tab2: Advanced



I think that if you use this tab, then you can write I2C Registers:

I2C Operations

Pins used: SDA(1), GND(2), SCL(3), +5V(4)

Following table lists the register definitions and setup commands:

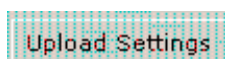
Commands		Action
ASCII	Hex	
A	0x41	Sort tracked objects by size
B	0x42	Select Object tracking mode
C	0x43	Set Camera Registers
D	0x44	Disable Tracking
E	0x45	Enable Tracking
G	0x47	Get the Color map from Camera Engine
H	0x48	Read the Camera Registers
I	0x49	Illumination on (Future)
L	0x4C	Select Line tracking mode
N	0x4E	Set ADPA mode ON (setting stored in NVRAM)
O	0x4F	Set ADPA mode Off (default) (setting stored in NVRAM)
P	0x50	Ping camera Engine
R	0x52	Reset Camera Engine
S	0x53	Send the color map to camera Engine
T	0x54	Illumination Off
U	0x55	Sort tracked objects by color
V	0x56	Get camera Engine firmware version No
X	0x58	Do not Sort tracked objects

I2C Registers:

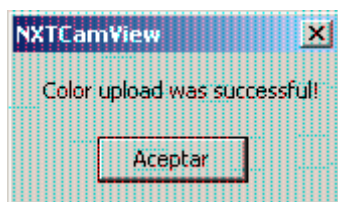
The NXTCam appears as a set of few registers as follows.

Register	Read	Write
0x00-0x07	Software version - <i>V1.10</i>	-
0x08-0x0f	Vendor Id - <i>mindsensors</i>	-
0x10-0x17	Device ID - <i>NXTCam</i>	-
0x41	-	Command
0x42	No of objects detected	-
0x43	first object color	-
0x44	X upper left	
0x45	Y upper left	
0x46	X lower right	
0x47	Y lower right	
0x48	Second object color	
0x66	8 th object color	
0x67	X upper left	
0x68	Y upper left	
0x69	X lower right	
0x6A	Y lower right	
0x6B	No of registers to R/write	No of registers to R/write
0x6C	1 st Camera register Add	1st Camera register Address
0x6D	1st Camera register Data	1st Camera register Data
0x7A	8 th Camera register Add	8 th Camera register Add
0x7B	8 th Camera register Data	8 th Camera register Data
0x80	Color map data Red 0	Color map data Red 0
0x81	Color map data Red 1	Color map data Red 1
0x90	Color map data Green 0	Color map data Green 0
0x91	Color map data Green 1	Color map data Green 1
0xA0	Color map data Blue 0	Color map data Blue 0
0xA1	Color map data Blue 1	Color map data Blue 1

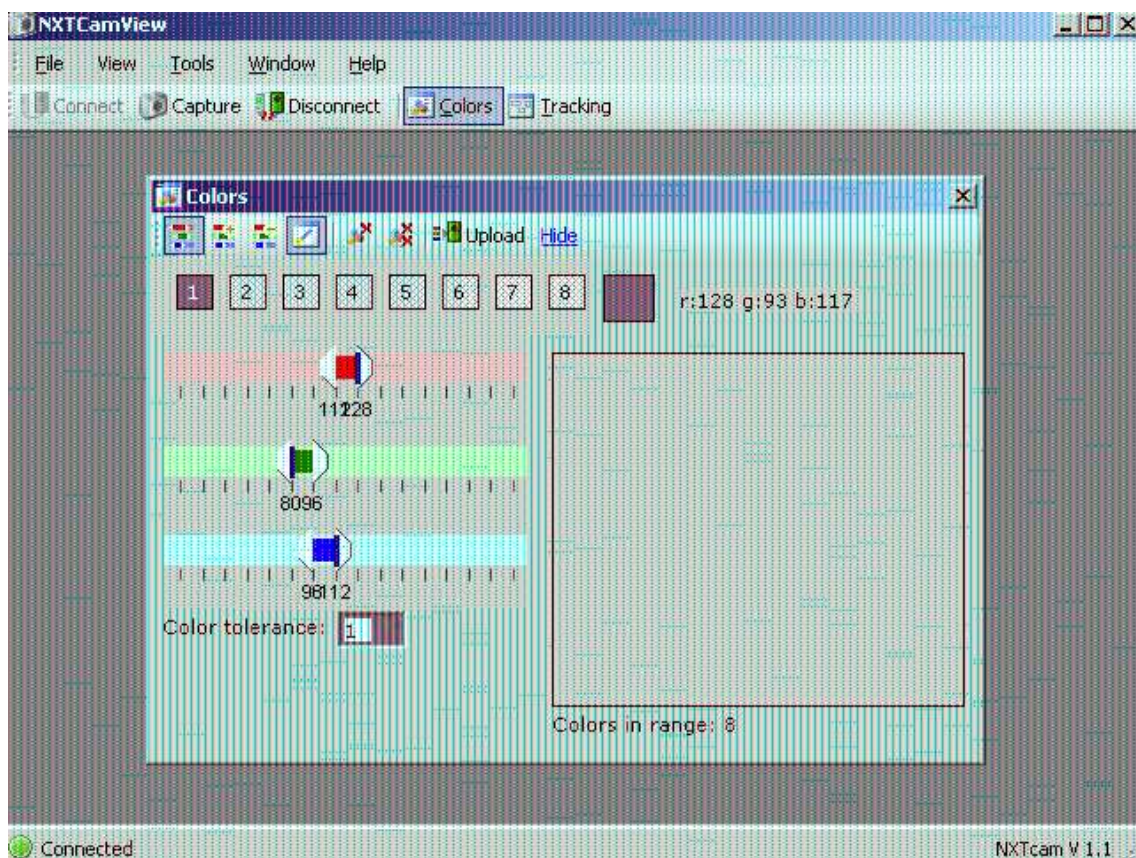
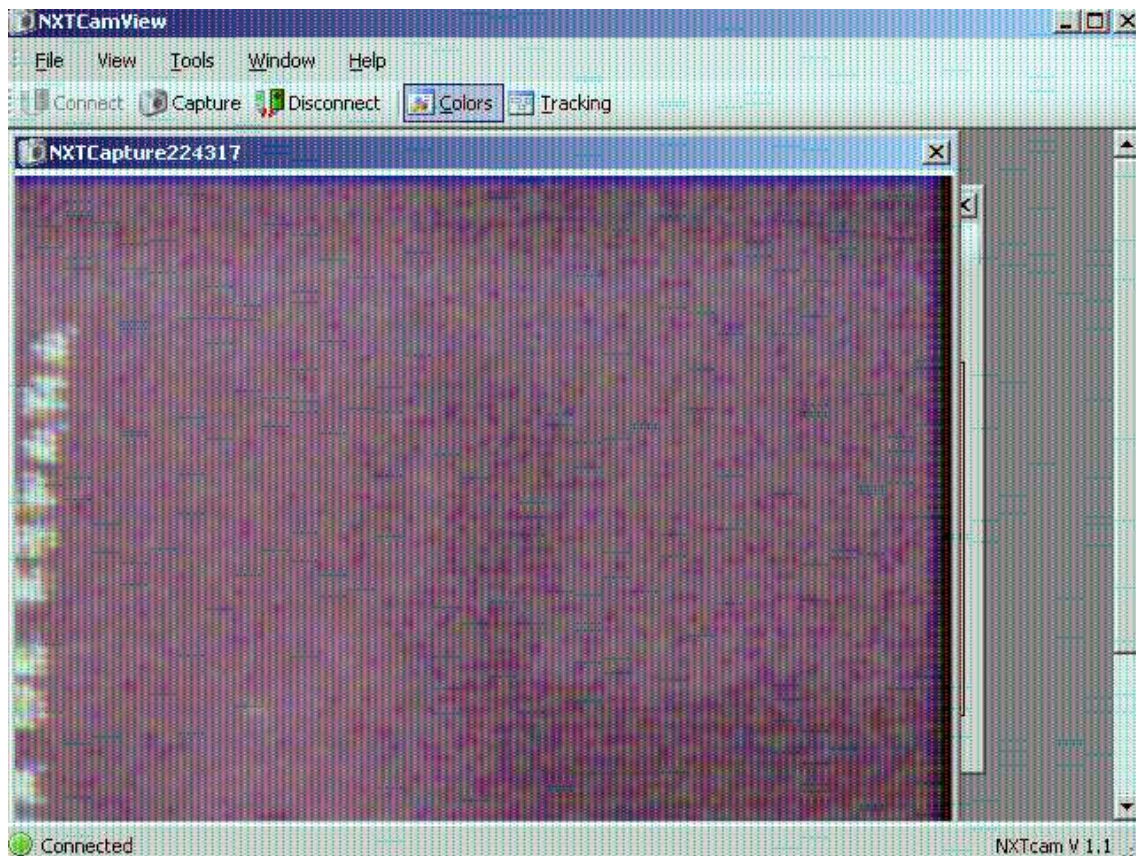
When I have defined this options, it is necessary to upload values into NXTCam using the following button:



Then all values are written into NXTCam.



When you have configured this options, it is time to manage color maps. To manage color maps, it is necessary to capture to start to define a color map. If I want to create my first color map, it is necessary to capture a image.



When I have defined all values (Red, Green and Blue) in color map 1,



then you can use any NXT Programming Language to read and write values from / to NXTCam sensor.

I would like to read values from color map1. I have read the document Nxtcam-V11-User-Guide.pdf and if i want to track values from color map1, I need to read values from I2C registers:

- 0x43
- 0x44
- 0x45
- 0x46
- 0x47

Is It necessary to set any value in NXTCam to receive values from that registers?

I have developed a NXJ Class to use this sensor, Can I help me?

<http://lejos.sourceforge.net/forum/viewtopic.php?t=559>

Doubts:

1. What registers in advanced tab are necessary to set to track color map1
2. It is possible to define a color map using I2C only?
3. In my first release of NXTCamSensor I want to track first color map, if a set color map in NXTCamView, it is necessary to set some registers to read after the registers: 0x43,0x44,0x45,0x46,0x47?