Ryzom - Bug # 1219

Status:	Closed	**Priority:**	High
Author:	kervala	**Category:**	OS: GNU/Linux
Created:	12/21/2010	**Assignee:**	kervala
Updated:	01/08/2011	**Due date:**	
Subject:	Bad color when rgba.cpp is compiled with GCC 4.2.4		

Description

We are currently using a workaround because when we compile rgba.cpp with optimizations on, a bug occurs and characters become blue.

History

#1 - 12/22/2010 12:50 am - kervala

- Status changed from Validated to Assigned

#2 - 12/22/2010 12:54 am - kervala

- Status changed from Assigned to Resolved

- % Done changed from 0 to 100

Applied in changeset r1264.

#3 - 12/22/2010 12:58 am - kervala

- Target version set to Version 0.8.0

In CRGBA::convertToHLS when R, G and B have same values, GCC 4.2.4 considers maxV is neither R neither G.

I have a test case to reproduce the bug (I'll post it tomorrow) and I think we could optimize this method using an array of floats and storing the index of the max value, so we'll not need to compare floats (which isn't accurate depending on round mode).

#4 - 12/22/2010 10:43 am - kervala

```
1#include <stdio.h>
2#include <stdint.h>
3#include <algorithm>
4
5template<class T>  inline T maxof(const T& a,  const T& b,  const T& c)
6   {return std::max(std::max(a,b),c);}
7
8uint8_t R = 127;
9uint8_t G = 127;
10uint8_t B = 127;
11
12int main()
13{
14    float r = R / 255.f;
15    float g = G / 255.f;
16    float b = B / 255.f;
```

```
17
18    float maxV = maxof(r, g, b);
19
20    // Get hue
21    if (maxV == r)
22    {
23        printf("r = %f\n", r);
24    }
25    else if (maxV == g)
26    {
27        printf("g = %f\n", g);
28    }
29    else
30    {
31        printf("b = %f\n", b);
32    }
33
34    return 0;
35}
36
```

Will give :

    b = 0.498039

When compiled with : g++ -O2 test.cpp -o test

and

    r = 0.498039

When compiled with : g++ -O0 test.cpp -o test

#5 - 01/08/2011 06:49 pm - kervala

- Status changed from Resolved to Closed