
Subject: Re: Arrys vs Vectors

Posted by [281264](#) on Tue, 21 Dec 2010 11:08:55 GMT

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Data are geometric objects (that require to be painted with OpenGL in a loop). For example:

```
template<class T>
class Point3D:MoveableAndDeepCopyOption<Point3D<T>>{
private:
    T x,y,z,w;
    unsigned int id,layer;
    bool picked;
    void Copy(const Point3D<T>& src){
        x=src.x;
        y=src.y;
        z=src.z;
        w=src.w;
        id=src.id;
        picked=src.picked;
        layer=src.layer;
    }
public:
    Point3D (){
        x=T();
        y=T();
        z=T();
        w=static_cast<T>(1.0);
        id=0;picked=0;
    }
    Point3D (T a, T b, T c,unsigned int e, bool f, unsigned int g, T d=static_cast<T>(1.0)){
        x=a;y=b;z=c;w=d;
        id=e;
        picked=f;
        layer=g;
    }
    Point3D (Point3D<T> &point){
        x=point.get_x();y=point.get_y();z=point.get_z();w=point.get_w();
        id=point.get_id();
        picked=point.get_picked();
        layer=point.get_layer();
    }
    Point3D (const Point3D<T> &src,int){Copy(src);}
    void set_x(T a){x=a;}
    void set_y(T a){y=a;}
    void set_z(T a){z=a;}
    void set_w(T a){w=a;}
    void set_id(unsigned int a){id=a;}
    void set_picked(bool a){picked=a;}
```

```

void set_layer(unsigned int a){layer=a;}
T get_x()const{return x;}
T get_y()const{return y;}
T get_z()const{return z;}
T get_w()const{return w;}
unsigned int get_id(){return id;}
bool get_picked(){return picked;}
unsigned int get_layer(){return layer;}
void operator*(const T& obj){
    x=x*obj;
    y=y*obj;
    z=z*obj;
    w=w*obj;
}
Point3D<T> operator+(const Point3D<T> &obj){
    return Point3D<T>(x+obj.get_x(),y+obj.get_y(),z+obj.get_z(),w+obj.get_w());
}
void Serialize(Stream& s){
    s<<x<<y<<z<<w<<id<<picked<<layer;
}
String ToString()const{
    String s;
    s<<"x:"<<x<<","<<"y:"<<y<<","<<"z:"<<z<<","<<"w:"<<w<<","<<"id:"<<id<<","<<"picked:"<<picke
d<<","<<"layer:"<<layer;
    return s;
}
};

```

I am using other geometrical structures, for example line3D, nurbs lines and surfaces.

Let us take a line. Here is the question: the two points that form part of a line, is it better to reference them by using pointers (hence Array has to be used to store the point3D) or by emulating their content or by storing a simple identifier (an unsigned int which looks the easiest way to do it)?.

Remark: I have tried to debug an Arry<int> array and added an integer array.Add(1): when debugging U++ crashes when clicking on the .vector, what is it going on wrong? It is weird, is it not?

Thanks,
Javier
