

---

Subject: Re: Fast way to find the same value in an array  
Posted by [greg michael](#) on Sun, 09 Jul 2006 15:10:36 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Instead of comparing each point with every other, suppose you do this:

- cut up your space into  $N \times N \times N$  subspaces ( $N=10$ , say)
- sort your points into each subspace
- for each subspace, consider the problem again, but including the neighbouring subspaces. So now you have  $27 \cdot N^3$  easier sub-problems.
- either solve these directly (now  $27 \cdot 10^7 / N^3 \sim 250,000$  points) or better, if you wrote the function well, feed these sub-problems back in for a recursive solution.

regards,  
Greg

---