
Subject: Re: Registering CT and MRI volumes
Posted by [davidf](#) on Mon, 05 Mar 2001 18:01:35 GMT
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karthik balasubramaniam (clunis_immensus@MailAndNews.com) writes:

- > I remember spotting a thread on registering medical volume data,
- > a while back. Unfortunately, I haven't been able to retrieve it at [deja.com](#),
- > which I've been using so far(only shows me recent postings).
- > Anyways, I need to register CT and MRI volumes, and was hoping someone could
- > point me to IDL(or even C/C++) code that does volume registration.
- > I do have some literature on the topic, but thought it worthwhile sounding
- > out
- > people before reinventing the wheel.
- > Any links, references, code would be immensely appreciated.

I have in front of me a pre-print of an article entitled "Volumetric image registration by template matching", written by Ardi Goshtasby's group at Wright State University. I saw this algorithm in action several weeks ago, and I must say I was extremely impressed with the speed and accuracy they have obtained.

The basic idea is to use a handful of templates from "high information content" areas of the volumes to do the matching, rather than matching the entire volumes. In this case, "high information content" means edges, etc. The algorithm can automatically select these templates and perform the matching. I saw it work well when the regions were just slightly mismatched and when they were significantly mismatched. I was impressed.

I understand the IDL algorithm will be made available for research purposes. You can write to Ardi Goshtasby at agoshtas@cs.wright.edu for additional information. Please give him my compliments.

Cheers,

David

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