CAS Assignment 3 - Registration

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What happens if you use an identity as initial pose?

With an identity as the initial pose, one will only find a local instead of global minimum

Describe two methods, how you can acquire the target data in the OR.

For automatic registration, two possible methods to acquire target data could be MRI and CT. By hand, tracked pointers or laser scanning can be used.

What is the minimum number of points you need for paired points matching?

At least three points are needed

If the patient moves, your calculated transformation is not accurate anymore. How can you prevent this?

With fiducials on the patients skin. They can be detected in real time.

We are in ENT surgery now. Which anatomical landmarks do you take for paired points matching and which surface for ICP. Explain why?

The more unique ones, the better. Also, they should surround the place of treatment. Therefore, for ENT surgery the ear canal or the nose tip for example would be suitable.