Multimodal Perception: Part 2
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Relevance

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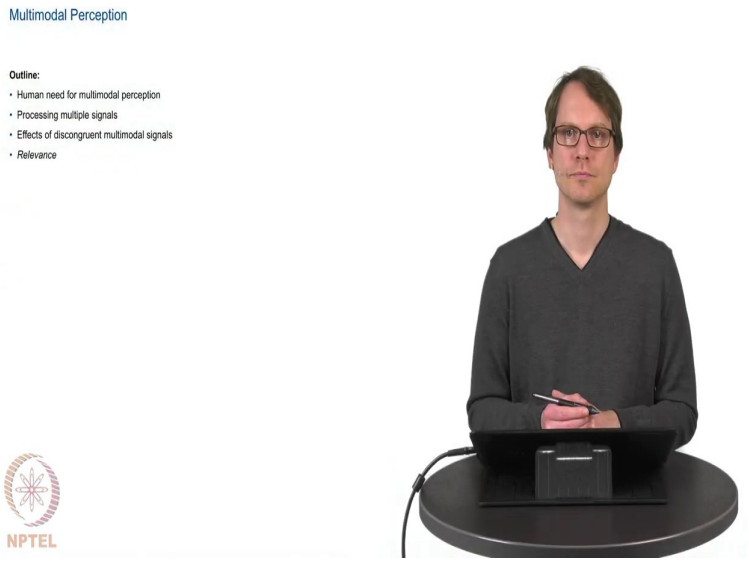

So let us conclude this session of about multimodal perception.

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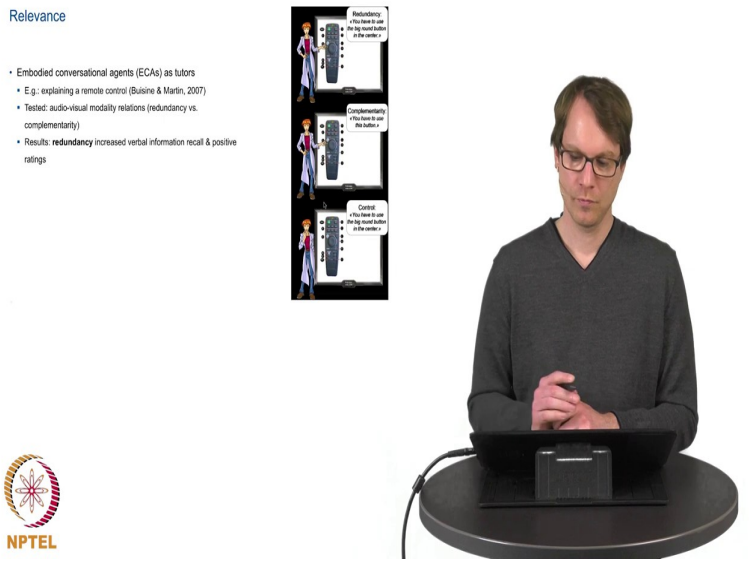

Here is a small example where we try to find out which kind of multimodal system output is beneficial for the users in HCI.

So here you have a kind of tutor explaining how remote control works. We have also a small animated virtual person and we have the remote control itself.

Here was tested whether which kind of information is beneficial for the users. So either redundancy, this means pointing to a certain button and explaining why this button is important or which kind of function this button has.

In this example is you have to use the big round button in the center for certain function. The alternative is to have a complimentary distribution of information on the different modalities. This means the information on the verbal channel just says you have to use this button.

And the identity of the button is only processed or available from the visual information from the pointed gesture. You know this complementarity and redundancy as modality relations from the first week.

There is also a control, control condition when no pointing gesture is produced. In the usability study it was shown that redundancy actually perceives the best results.

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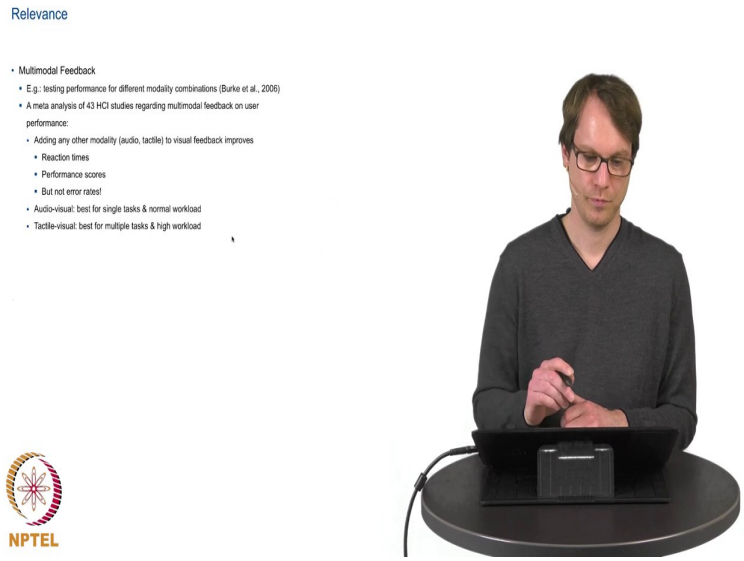

This can be generalized to certain modality relations and modality usage.

For example there is a bigger study, a meta study which analyzes empirical results from a lot of smaller studies where different combinations of modalities, in this case haptics mostly vibration, but also acoustic information and visual information are compared according to users, to feedback to the user from the system.

This means warnings and information and so on. What this meta study found out is that any kind of multimodal information, multimodal system output is actually beneficial.

They also found out that audiovisual information is best for single task and normal workload whereas tactile visual information this means the screen information and vibration is best for multiple tasks and higher workload.

So having multimodal system output, this case this means of course multimedia output for this kind of system feedback increases reaction times, performance scores but unfortunately not the error rates. This is just one smaller example how to study multimodal human computer interaction.

I will not go into detail anymore about the multimedia part about the system output, as we want to concentrate here in this whole course on the multimedia, on the multimodal input of the multimedia output. And there are also a lot of other courses which deal for example on multimedia learning and so on.

So this completes the multimodal perception part of this week.