

PROJECT

3D Face

3D Imaging of Faces in Security Documents

The 3D Face project researches how faces in future security documents can be imaged in three dimensions. The project is developing a system for the 3D capture and visualization of faces that can be used as an improved means of establishing identity.

For secure identification of individuals, a person's photo plays an especially important role. However, secure identification is difficult in uncontrolled situations as various forms of lighting or ways the head is held can render comparisons between persons and their photos problematic.

3D passport photos reduce the influence of such variables as any subsequent head postures or lighting can be adapted to the situation in hand. Thus establishing a person's identity is made substantially easier and a new standard for secure personal identification is set.

Technical Background

- Use of a passive camera array for facial reconstruction from a small number of shots
- Three dimensional adaptive form model based on statistical analysis
- Efficient storage only of individual personal features
- Adapts to variants like lighting, poses, ageing
- Efficient processing, extraction of features and data storage
- Use of novel displays in documents



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