

# MAKERBOT® STORIES

## DATA VALIDATION DEVICE *DOCULUS LUMUS*

„It is an extraordinary device which facilitates  
and accelerates the mobile work for policemen.“

Matthias Draxler,  
document security specialist  
at Graz State Police Headquater



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## DOCULUS LUMUS® FACILITATES POLICE OPERATIONS

### THE MAKERBOT® REPLICATOR® DESKTOP 3D PRINTER IN USE AT CAMPUS 02 UNIVERSITY OF APPLIED SCIENCE

Passports, money, or identity cards have sophisticated security features in order to render falsification extremely difficult. Therefore, certain parts of the security features can only be recognized with special technical support. charismaTec OG, a document security specialist from the BMI (Federal Ministry of Internal Affairs) as well as professors of Campus 02 in Graz, Austria, from the automation engineering course are tackling the issue. With the help of a **MakerBot Replicator Desktop 3D Printer** they created a validation device for the police.

**Doculus Lumus®** is the name of the hand sized device. A new technique has been used, which integrates a revolving light to visualize intaglio printing and color changing objects. "Spotlights, UV lights, an integrated flashlight, longlife batteries and an RFID reader to read memory chips are needed to proof security features", says Matthias Draxler, a document security specialist at the state police headquarter of Graz. "Due to the Schengen Agreement passport controls are conducted throughout countries. Thus, the validation device has to be portable." Campus 02 and charismaTec OG not only achieved to create the entire necessary electronic components and the micro controller programming, but also designed, developed and created the prototypes and a first small batch series of the case with a MakerBot Replicator Desktop 3D Printer.

Matthias Draxler is proud of the invested effort of the technicians: "It is an extraordinary device which facilitates and accelerates the mobile work for policemen." Meanwhile, the Doculus Lumus® data validation device is in use in many countries worldwide and on a daily basis.

[www.doculuslumus.com](http://www.doculuslumus.com)



The wide range of the MakerBot Filament enables the choice of difference colours of the device



Facilitated data validation in police operations



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