

托福阅读素材：3D 效果与犯罪

人类已经不能阻止 3-D 技术了，瑞士的科学家们正在开发能帮助警方在现犯罪现场甚至进行虚拟尸检的技术。利用相关技术，并基于目击者描述和监控摄像头的记录可以来重构实际的犯罪情况。今天的托福阅读材料就来详细说明这一技术！

Investigator n. 研究者;调查者

Visualize vt. 形象;设想 vi. 显现

autopsies n. 验尸

surveillance n. 监督;监视

scan n. 扫描;浏览;审视 vt. 扫描;浏览

trajectory n. [物] 轨道，轨线

projectile adj. 抛射的;抛掷的

coupled with 加上，外加;与...相结合

Crime Scenes Re-Created in 3-D Visualization

3-D 重建犯罪现场

Scientists at the Institute of Forensic Medicine in Zurich, Switzerland, are developing technologies that can help police investigators, judges and lawyers better visualize crime scenes and even perform virtual autopsies.

The Oculus Rift headset, used for video games, coupled with specially developed software called Forensic Holodeck, re-creates crime scenes using hand-held 3-D scanners. Investigators use the 3-D images to reconstruct the actual crime based on witness accounts and recordings from surveillance cameras.

Radiologist Steffen Ross of the Zurich institute said that with the equipment, "we scan the crime scene and we are also able to scan the dead body, if there is a dead body involved, and then we can put all the data together in the computer and create a virtual crime scene, which is a 3-D model of the crime scene."

The software even reconstructs bullet trajectories, represented by red and yellow bars.

"We were able to have a much better look at the trajectories of the projectiles, than we were able to see it in a two-dimensional manner," Ross said.

Another new technology developed at the institute is a robot called Virtobot, which forensic scientists can use to perform virtual autopsies in great detail.

Institute scientist Robert Breitbeck said the system provides a 3-D model of the human body, inside and out.

“We can scan the skin with the pattern injury in color and true to scale so we can store it, and later we can combine it with 3-D data, which the police scan together with us,” Breitbeck said. “And with this 3-D data, we have a basis [with which] we can do the 3-D reconstructions or visualizations of murder cases or traffic accidents.”

Both systems are already being used in several countries around the world.

长难句:

1. In a recent case, the technology helped prosecutors prove a gunman’s actions, leading to his conviction.

句子类型: 结果状语

句子拆分:

主干; the technology helped prosecutors prove a gunman’s actions.

结果状语: leading to his conviction

翻译; 在最近一起案件中, 这种技术帮助检方证明一名歹徒的罪行, 并确认他有罪。

2. We can scan the skin with the pattern injury in color and true to scale so we can store it, and later we can combine it with 3-D data, which the police scan together with us.

句子类型: 状语从句+定语从句

句子拆分:

主干; We can scan the skin with the pattern injury in color and true to scale and later we can combine it with 3-D data.

状语从句: so we can store it

定语从句: which the police scan together with us

翻译: 我们能扫描损伤模式的颜色和规模, 这样就能储存这些信息, 然后结合警方配合我们扫描的 3D 数据。

文章大意:

瑞士苏黎世法医学研究所科学家们在开发能帮助警方调查人员、法官和律师更好地再现犯罪现场甚至进行虚拟尸检的技术。

这种用在视频游戏中的虚拟现实耳机和专门开发的名叫 Forensic Holodeck 的软件结合在一起, 就能使用手持 3D 扫描仪再现犯罪现场。调查人员使用这种 3D 图像、基于目击者描述和监控摄像头的记录来重构实际的犯罪情况。

在最近一起案件中, 这种技术帮助检方证明一名歹徒的罪行, 并确认他有罪。

苏黎世研究所的放射线学者斯特芬·罗斯说，有了这种设备，“我们就能扫描犯罪现场，还能扫描尸体，如果有尸体的话，然后将所有数据输入电脑，就能创造虚拟的犯罪现场，也就是 3D 犯罪现场。”

这种软件甚至还能重构子弹轨迹，由红色和黄色条来显示。

“我们能更好地观察炮弹的轨迹，比通过二维方式看到的效果更好。”

该研究所开发的另一项新技术是名叫 Virtobot 的机器人，法医科学家可以用来进行详细的虚拟尸检。

研究所科学家罗伯特·斯坦贝克说该系统能提供人体内部和外部的 3D 模型。

“我们能扫描损伤模式的颜色和规模，这样就能储存这些信息，然后结合警方配合我们扫描的 3D 数据，有了这些 3D 数据，我们就有了进行 3D 重建的基础，也就是将谋杀案件或交通事故视觉化的基础。”

两种系统已经在全世界几个国家得到应用。

文章架构：

第 1 段：瑞士苏黎世法医学研究所科学家们在开发能再现犯罪现场甚至进行虚拟尸检的技术。

第 2-6 段：一种技术：游戏中的虚拟现实耳机和专门开发的名叫 Forensic Holodeck 的软件结合在一起，就能使用手持 3D 扫描仪再现犯罪现场的介绍

第 7-9 段：另一种技术；Virtobot 的机器人的介绍。

第 10 段：两种系统已经在全世界几个国家得到应用。

文章类型：

自然科学类

以上就是我们今天的托福阅读文章及分析，希望大家可以学到相应的托福阅读背景知识。