About Gerd Binnig, 1986 Nobel Laureate for Physics

Munich, Germany

At Definiens, we are of course very proud of having a Nobel Prize laureate as the founder of our company. But for us, Gerd is more than that. He is a creative, multi-faceted talent. A curious physicist who thinks outside the box, is passionate about the Arts, enjoys painting and loves music. Besides being a successful entrepreneur, productive scientist and researcher, Gerd has also been a popular author. For instance, he wrote a book ("Aus dem Nichts - über die Kreativität von Natur und Mensch") on human creativity and chaos, in which he argues that creativity arises from disordered thoughts.

Along with his colleague Heinrich Rohrer, Gerd was awarded the Nobel Prize in Physics in 1986 for his work on scanning tunneling microscopy (STM). STM is a microscopy technique, which forms an image of individual atoms on a metalic or semiconductor surface by scanning the tip of a needle over the surface at a height of only a few atomic diameters. The Royal Swedish Academy of Sciences was so impressed that it awarded the two scientists the Prize only five years after the first successful STM test run. The Academy recognized that although the tool was still in its infancy, it would open up "entirely new fields for the study of the structure of matter." Unlike other Nobel Prize winners who wait until their waning years for the honor, Gerd was only 39 years old at that point. In his Nobel speech, he said, "I couldn't stop looking at the images. It was like entering a new world."

Gerd also invented the atomic force microscope (AFM), which started a new field of microscopy. For the first time, the AFM made it possible to image materials that were not electrically conductive. Without Gerd Binnig's contributions, there would be no nanotechnology as we know it today.

Images have continued to play an integral part in Gerd's life. In 1994, he started his own company Delphi Creative Technologies GmbH as a think tank, which eventually became Definiens. His inspiration behind Definiens was the integration of human perception models into software for the analysis of complex systems. He explained, "Machines that are able to handle this complexity can be regarded as intelligent tools that support our thinking capabilities. The need for such intelligent tools will grow as new forms of complexity evolve; for example, those of our increasingly global networked information society." Together with a team of young scientists, he set out to find an effective method for extracting intelligence from any digital data, including texts, numbers, tables and - images. Definiens Cognition Network Technology is the outcome of these painstaking efforts.

The company won various prices, including the 2007 United States Frost & Sullivan Award for Technology Leadership and in 2002 the European Information Society Technologies Prize for the eCognition product. It is a new software that is able to accurately and reliably analyze satellite and aerial images. Definiens was also ranked in the Deloitte Technology Fast 50 Awards for being one of the fastest-growing technology companies in Germany.