Before 20 years ago all endodontics procedure was performed using tactile sensitivity and most of the effort was taken using tactile skills and some visual information. At that time the only way to see inside the root canal system was to take a radiograph. Therefore the limitation of radiographic picture was a challenge. When we have a problem (a ledge, a perforation, a blockage, a broken instrument) was only felt and the clinical management of the problem was never predictable. The key standard for the clinical evaluation is the amount of visual information available. The introduction of dental operating microscope is one of the most important tools coming in the last 30 years. Magnification and coaxial illumination have enormously increased the possibility of saving teeth both non-surgically and surgically. These advances have enabled clinicians to complete procedures that were once considered impossible or that could be performed only by talented or lucky clinicians. The biggest revolution due to the introduction of the microscope in non-surgical endodontics is in the retreatment field. This presentation shows the huge shift in clinical accuracy from low magnification tactile driven endodontics to vision-based endodontics is bringing a revolution to the field of endodontics with greater success rate.