Lean&Zoom
Chris Harrison, Scott Hudson

Lean forward to achieve visual enlargement is natural.

Alleviate detrimental damage to posture as well as eyestrain, double vision, headaches and other vision-related problems that can result from strained on-screen reading. With Lean&Zoom, you can magnify any on-screen content automatically by simply leaning forward. Content zoom is directly propotional to the extent of your lean – the greater you lean, the greater your magnification.

TARGET POPULATIONS:
• Computer users
• People with visual impairments
• Cell phone & mobile device users

BENEFITS:
• Improves object recognition
• Increases scanning speed
• Facilitates focus on fine details
• Eases eye and neck strain
• Intuitive, natural and easy to use

ABOUT THE RESEARCH
Lean&Zoom’s proprietary vision system tracks a user’s lean gestures as input signals. A camera with the horizontal resolution of 640 pixels allows horizontal movement as small as 0.8mm to be detected, providing a resolution in the lean dimension of around 4mm. A series of discrete zoom levels are used to allow the user freedom to move (e.g., shift position in chair) without the magnification level changing. The gain of the zoom can be individually adjusted as desired.

Lean&Zoom provides system-wide magnification without requiring modification to the user interface. On-screen magnification is achieved by capturing the current visual appearance and scaling the image.

“Lean&Zoom relies on a camera to calculate a user’s lean position. This is an attractive approach, as computers with built-in or bundled cameras are becoming increasingly prevalent, allowing the technology to be readily and inexpensively deployed.”

--Chris Harrison, Carnegie Mellon University

Download Lean&Zoom to your PC or Mac today! Visit www.leanandzoomllc.com

TO LEARN MORE: Visit www.chrisharrison.net/projects/leanandzoom/index.html or www.qolt.org

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