Technology Assessment Group

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The Economic Payback of 3D Mice for CAD Design Engineers

Extract of the research findings [1] of the Technology Assessment Group

Technology Assessment Group (TAG), an independent product consulting firm specializing in product evaluation and productivity measurement, conducted this research to assess the economic impact of 3D mouse use by CAD design engineers.

User interface research by GE, IBM, and the University of Toronto suggests that substantial productivity gains should result from using well-integrated 6-degree-of-freedom (6DoF) devices for complex 3D applications such as 3D CAD.

1. Improvement in product design

More than 84% of CAD design engineers report a noticeable or significant improvement in their product designs and their ability to detect design problems as a result of using 3D mice**.**

2. Productivity up by over 20%

The average productivity gain reported by CAD users while using 3D mice is **21%**.

3. Short payback period

The payback period for 3D mice is very short, typically **less than one month**.

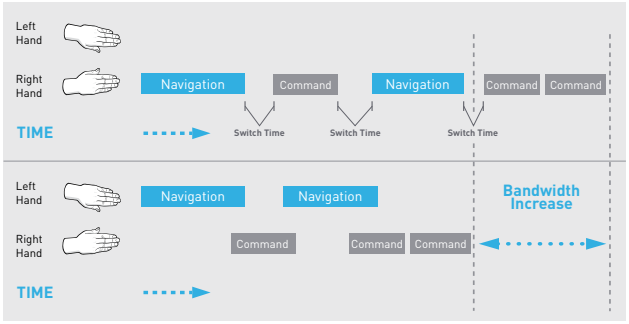

Fig. 1 - Comparison of single stream user input (one hand) vs. bi-manual (two handed) input stream. Notice how the user can "start" the command with the right hand while the left hand is completing the navigation.

Payback Calculator

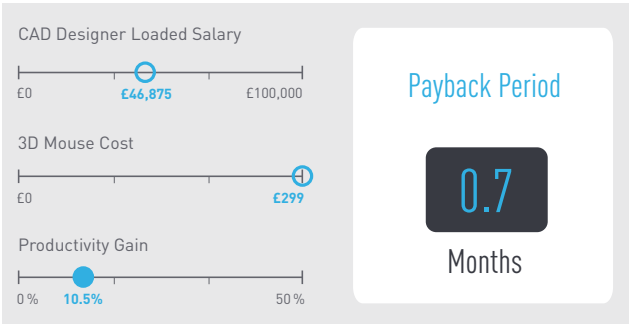

Fig. 2 - Example calculation with 10.5% productivity gain

See for yourself how 3D mice can help to boost performance in your organisation.

To download the full report, click here

[1] Source: The Economic Payback of 3D Mice for CAD Design Engineers – July 2008

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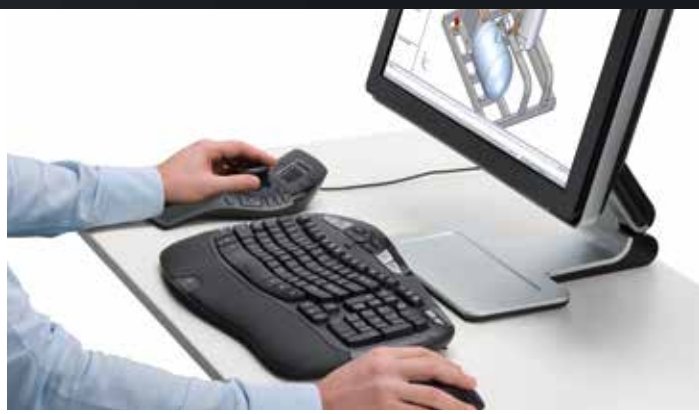
Ergonomic Efficiency Testing Two-Handed vs. One-Handed CAD Working Styles

Extract of the research findings[1] of the Ergonomic Technologies Corporation

Ergonomics Technologies Corporation, a leading independent ergonomics consulting firm, specializing in the use of objective measurement systems to analyze human interactive systems, analyzed two contrasting human computer interfaces at a Fortune 100 company.

20 CAD users were assessed, using a two-handed working style (3D motion controller and mouse) vs. a one-handed working style (mouse augmented by keyboard). Each input method was used to complete four common tasks yielding the following results:



Left Hand Motions — 67% Reduction

Right Hand Motions — 64% Reduction

Overall Average Wrist Posture Plane of Motion: Average Flexion/Extension — 57% Reduction

Overall Physical Demand Both Muscle Groups and Arms — 33% Reduction

90% of the subjects would prefer to have a 3D mouse available for their CAD use.

To download the full report, click here

[1] Source: Ergonomic Efficiency Testing Two-Handed vs. One-Handed CAD Working Styles, Ergonomic Technologies Corporation.

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