(this represents only subjective views; no responsibilities can emerge out of this, the content must be completely overviewed and judged seperately by many responsible researchers, citizens and experts before taken for sure)

"Market ---- An optimistic view"

Look at the 2D and 3D interfaces respectively: I declare, that the transformation of the 2D computerworld into 3D is in full progress.

Two main methods of cursor positioning from user towards machine are well established. Hand- trackers without release and hold capability are here not regarded.

- 1) linear method, with pause possibility for slow users and equilibrium of the mouse and cursor in case of doing nothing: This is the mouse and mousepad in 2D.
- 2) the incremental speed parametrisation where time is used together with speed quantity for acheiving intended target position. In this case two dimensions are meddled (position and time) and the result is more burnt concentration of the user brain for one elemetary step. The 2D joystick, which is the tool of speed parametrisation, is known in 2D from the middle of the laptop keybord, called the trackpoint. There is no stand alone version sale observed for cursor manipulation by the trackpoint, therefore it can be regarded as rejected by the users. (games are a different world)

So we can set up a simple table:

2D: mouse+mousepad = success, trackpoint = flop

3D: DSC=3D mouse = ??? spacemouse = moderate success (now completely unknown) (in absence of powerful competitors)

The market of mouse is great, as wikipedia tells us: > 1 billion pieces sold by 2005, WooooW!!

The spacemouse, this is definitely the 3D-joystick(and more), has sold at least more than 500 000 items (I do not know the numbers).

How will be the exspectancy about the linear device called "The Direct Space Control" (DSC)? (We speak only about the basic model 3D+ 2 clicks).

If you take a price of 100 Euros due to precision mechanics, but perform considerably better than competitor, you can get a major market piece of 33% of the present users within 20 years, maybe future cheap models for 50 Euros even 50% in about 15 years.

That would mean about 500 000 000 pieces worldwide by 2023, with 20 or 30 billion Euros of turnover. (I neglect PC market growth in the future).

WooW! Something for large Computer manufacturers. Sales of powerful stereo graphics units, 3D autostereoscopic monitors, new software, economics goes up!

But serious questions remain: Why shall the 3D mouse be DSC and not something different or different and similar? The properties of ergonomics have been analysed by me and are contained in the suggested device. A mechanical suspension of weight at every point needs in the simplest case 3 axes and stiffness providing joints, and that's what is presented already. Everything else adds complicatedness and

sets itself back in price.

The whole article is a dream and a very subjective and personal outlook for future, critics are welcome.

Why should there be an attractivity for users? Of course, 3D is in progress, the property of linearity is deeply combined with intuition of the mind, and 3 dims are trained from childhood permanently, both, imagination of object space and grasp coordinates with the hands. For example, take a spoon and eat!

Intuition is a great scale diminution of neurological concentration need and a therefore a fatigue- avoiding style of performing steps. Greatly honoured is the amount of simplification without thinking explicitly during performing tasks. The user does trial and error with several interfaces.

Another very important fact is the availability of software structures, which make intuitive handling possible. This will be driven by developments of the market, but not be the beginning. The beginning must be special programs together with one DSC item and increased user comfort of the package. This sets the package ahead of older competitors by increased user comfort.

Moreover existing programs may earn a lot of additional comfort by upgrades together with DSC. Example: The 3D pencil in Google's program "Sketchup". Presently the 2D mouse produces trajectories in a plane, and only by a tool you can change the plane and continue in another plane afterwards. Do not forget the market of computer aided construction programs.

The general argument for user attraction of 3D mouse after a lot of analysis will be: a great scale fatigue diminution for users while performing complex and daylong instructing and operating tasks (after acheived 3D software evolution) will be the result. This fact will incend business.

A question, following, is: will existing patent under work hold, and reject competitors in the chosen markets? (this is not of interest for almost everyone except me)

My question: Is all the former statement realistic, or what is wrong? The discussion should take place.