Re: resolve to perpendicular components, because they are independent

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- *From*: Hero.van.Jindelt@xxxxxx

- *Date*: 23 Jan 2006 15:21:37 −0800

Ken S. Tucker wrote about
> > > ....an orthogonal 4D....
To be honest, i feel like a woman, being told by her husband "Yes dear, You are right." while he is thinking "'...and i got my peace.'", so my words got labelled and stored away in the back part of the wrong drawer.
I'm not a physicist, having just basic knowledge, but i notice, that You avoid a direct answer to:
"Can You explain, how a fourth dimension can be orthogonal to the three of space, measured in cm^3?,
which arose from Your mentioning of "an orthogonal 4D".
The mathematical ideas and speculations of Riemann, which can be found here
http://www.maths.tcd.ie/pub/HistMath
led to best science fiction and some interesting math and he could differ between both. This is testified and described in the last pages of
James Clark Maxwell's "A treatise of electricity and magnetism".
(Actually i always thought the "Preliminary" of the first 31 pages would be all i could achieve understanding in my lifetime, but reading here so much about aether, so i wanted to know, what Maxwell thought about this. Just read for Yourself the last sentences of his work and what was his "constant aim in this treatise" of about a thousand pages. That intrigues me very much, so i hope, i can achieve some understanding of this too in my life.)
Now, one hears a lot of loud talking about Riemann, but i never met even one, who didn't mix the math with the math−fiction to an undistinguishing mud, something Riemann always tried to avoid. All what they are doing, is:
Expanding a 2D−space twice. Some do this on purpose, like Hilbert, and some out of not−knowing better − but all skip the third dimension.
Take a simple sphere and consider a diameter − that are three points on a straight line, two are on the surface and one is the center. The line is the shortest connection between the two outer points with extension (the two points mark an intervall on this line). Where do You find this with Hilbert? How can one proceed to "an orthogonal 4D" and skipping this 3D−shortest−path? I don't grasp.
Just one step further is a step back to Thales: From every point of a

circle a diameter appears under a right angle. This is true for every
point on a sphere too (the proof is left to the reader).
And that's it in 3D. Now please do this in 4D and try to explain.
Or− if You preferr analytical structure over geometrical − please
explain, how the square of a density can be on equal footing with the
square of a length of a distance and at the same time doesn't coincide
somehow with three orthogonal extensions (and this for every set of
two points possible)? To illustrate density in 3D i only know the use
of different shades of grey, or "translated" into different colours or
into "frames"
(the discret form of displaying time with films and computers). Please
show me "an orthogonal 4D".
Regards
Hero

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- ***Follow−Ups***:
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    - *From:* Ken S. Tucker
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    - *From:* FrediFizzx
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