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IS THE 3rd ANGLE METHOD IS THAT OF 3rd ONE?

An analysis of widely presented examples of 3rd angle using shows that there are two main problems about if the 3rd angle method is that of 3rd one. When we talk about Gaspard Monge's two perpendicular planes system 1st and 3rd quadrants are applicable for technical drawings. "Quadrants 2nd and 4th are also mathematically valid, but their use would result in one view "true" and the other view "flipped" by 180° through its vertical centerline, which is too confusing for technical drawings... The addition of a third plane to show a side view (either left or right) is a modern extension. The terminology of quadrant is a mild anachronism, as a modern orthographic projection with three views corresponds more precisely to an octant of 3D space" (Wikipedia).

As often as not a third profile plane P is chosen at the right side of the horizontal H and vertical V planes (Fig. 1).
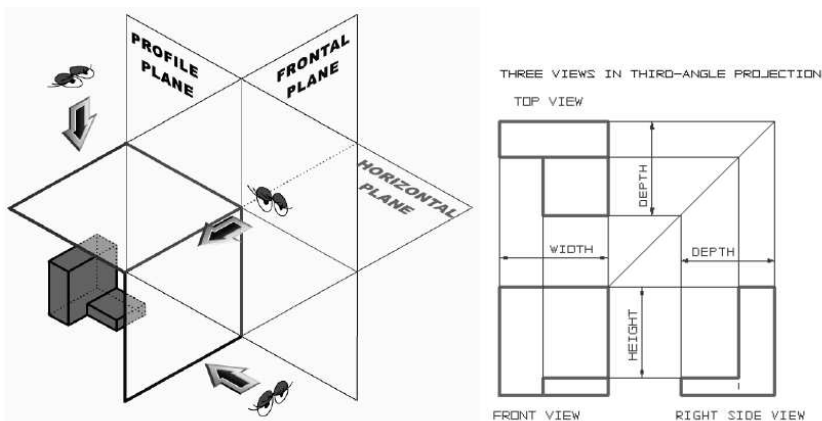

Fig. 1. Object placed in 3rd octant

(http://www.me.metu.edu.tr/courses/me114/Lectures/Introduction%20to%20Descriptive%20Geometry

.pps#261,11,Orthographic projection)

But there is analogous with 2nd and 4th quadrants problem. Right side view will come up on front view when we will rotate profile plane about vertical axis (Fig. 2).
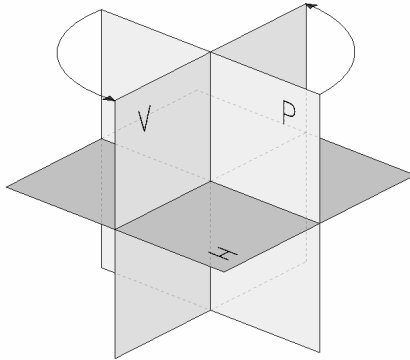
Fig. 2. Direction of profile plane rotation about vertical axis

Another position of the profile plane P is at the left side of the horizontal H and vertical V planes (Fig. 3), but in this case the object is placed not into 3rd but into 7th octant.
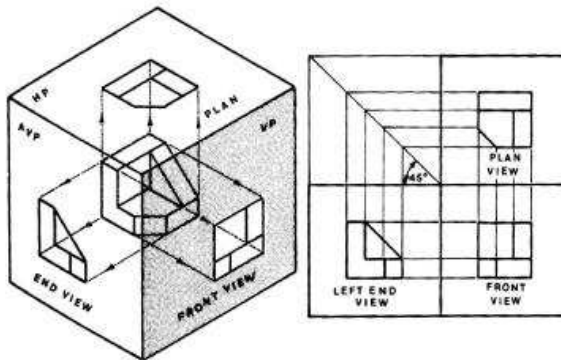

Fig. 3. Object placed in 7th octant (http://transport.itu.edu.tr/PDF/mak112e/CADD-3.pdf)

Therefore the 3rd angle projection method isn't possible without reservation. Agreeable to 3D space octant model may be 7th octant model, but with not practical front, top and left side views displacement for A4 format.