1. Let’s assume 4 satellites are visible and we know where is the receiver (6400,000; 0; 0) [m], it means it is on the equator, near the surface (6400 m)
   1. Receiver is in the middle of the square (see photo1). 1,2,3,4 points represent the satellites above the receiver.
   2. Calculated satellite positions can be seen on the photo1 SatPos1…SatPos4. To keep it easy, we assume that the horizontal distances between the satellites and the receiver are 1000 m. The height of satellites: 20,000 m
   3. Rho1…Rho4 geometrical ranges between each satellite and the receiver can be calculated: Satellite position vector is subtracted from the receiver pos. vector, then it is normalized.
      1. In this special case geometrical ranges will be the same: ~20,050 m
   4. Now we add errors to each Rho values resulting Pr1…Pr4 pseudoranges
   5. At first iteration we assume we are at middle of the Earth (0,0,0)
   6. D1…D4 compensating values coming from different models: ionosphere, troposphere etc.
   7. Now the matrix equation can be written, see photo2.
   8. Balazs is calculating =), photo3
   9. Photo4: dx, dy, dz, need to be calculated, reflects the position change in the current iteration
   10. We ended up at photo4