cameras.properties file and 35mm equivalent focal length

The cameras.properties file is used by jAlbum and some of its skins to display the 35mm equivalent focal length.

How does it work?
The software looks in the EXIF properties of the picture for the real focal length of the lens and for the camera identifier.
Then it looks in the cameras.properties file for the focal length multiplier of this camera.
Finally it multiplies the real focal length by the focal length multiplier, and that gives the 35mm equivalent focal length.
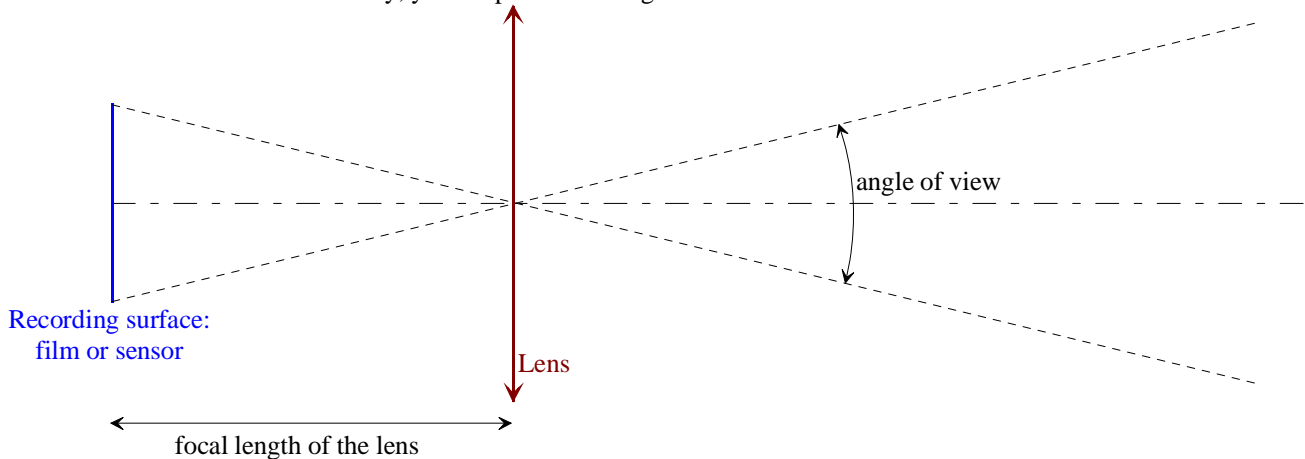
What is the 35mm equivalent focal length ?
Before year 2000, almost every photographer was using 35mm film cameras. The picture was recorded on a rectangular surface of 24x36 mm (ratio 36 / 24 = 1.5). Since almost everybody used the same film dimensions, every photographer knew that a focal less than 28mm was a wide lens, 50mm was a "standard" lens, and a focal greater than 150mm was a telephoto lens. And it was easy to compare lenses, just by their focal.

What is the difference between a wide lens and a telephoto lens?
It is the angle of view. According to the figure below, you see that the angle of view for far objects is directly linked with the focal length and the size of the recording surface.
Note that, for a given recording surface, the angle of view decreases when the focal increases (=> telephoto).
Note that, if you resize the whole figure, you keep the same angle of view, which means that if you reduce the sensor size and the focal of the lens in the same way, you keep the same angle of view.

What is the focal length multiplier ?
1) Imagine that you have a 35mm camera and a lens of focal 100mm. The image is recorded on a 24x36 mm area.
2) Imagine that you have a digital camera, with sensor dimensions half the size of the 35mm camera film (i.e. 12x18 mm).
With the second camera and a lens of focal 50mm, you get exactly the same angle of view as the 35mm camera.
You will say that the focal length multiplier of the second camera is 2.
It means that on this second camera, a lens of focal 50mm is "equivalent" to a lens of 50 x 2 = 100mm on a 35mm camera ("equivalent" in the sense that it has the same field of view).

How is the focal length multiplier defined ?
I suppose that you want to evaluate the focal length multiplier of a digital camera (but the same holds for a film camera).
First of all, it is important to notice that the focal length multiplier depends only on the effective size of the sensor (i.e. the size used to record the picture). It does not depend on the lens, the focus distance, or whatever else.
1) If the sensor size is homothetic to 24x36 mm (i.e. a width / height ratio of 1.5), the focal length multiplier is simply the ratio between the two sizes, as explained in the previous paragraph.
2) If the sensor size is not homothetic to 24x36 mm, the focal length multiplier is generally defined as the ratio of the 35mm film diagonal by the sensor diagonal.
Note that nowadays, the same camera can change the sensor area used to record pictures. It is done for instance when the same camera can be set to takes pictures with different width / height ratios. It means that the same camera can have several different focal length multipliers.