Calculating scale bars and adding image attributes with Gimp and Xfig iww

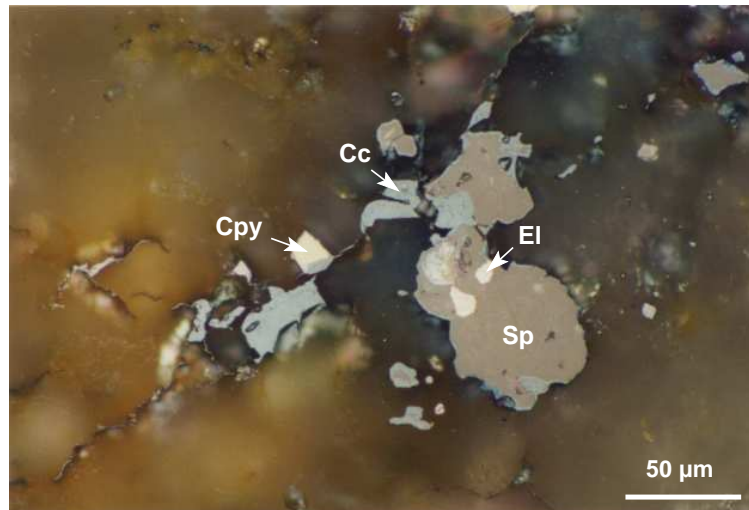## 1 Scale bar for microscope and microprobe images[1]
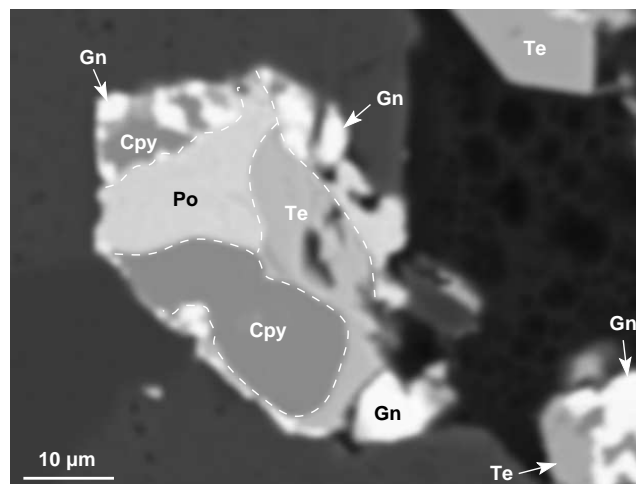

Figure 1: cc-cpy-disease.eps

Figure 2: tet-gn-po-1.eps

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[1]Check the precise distance of a microscopic image before defining the scale bar. Each microscope has a special image length.

Table 1: *x*-ordinate in Xfig for scale bar (15cm fotolength), read setting for the photos sizes (photolength was calculated based on Microprobe measurement).

Objective	Photolength (μm)	Length (μm)	Length of Xfig scalebar (pt)
2.5	6500	1000	1040
10	1625	250	1040
20	810	100	832
40	405	50	832
50	325	50	1040

2 Scaling from scanned sample

2.1 Rescaling scanned image into exact postscard size with Gimp

1. Calculate $L' = W * 592/403$ or $W' = L * 403/592$ (depend on wether L or W to be a constant value)
2. Crop image (with Gimp) based on a size $L = L'$ or $W = W'$
3. Save as a different file name
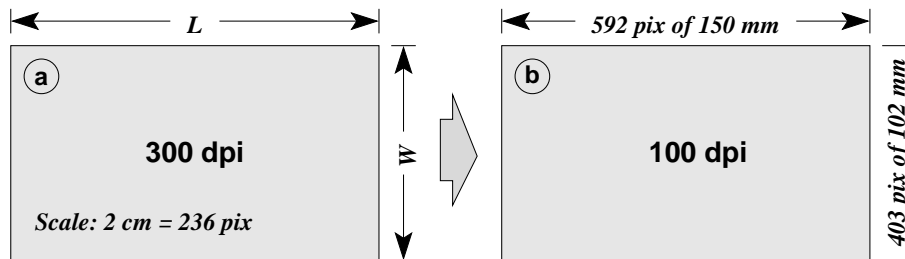4. Scaling image into length 592 pix, 150 mm and 100 dpi
5. Save as EPS Level 2

Figure 3: Scaling image scheme. a) Original scanned image. b) Rescaled image

2.2 Adding a scalebar with Xfig

1. Calculate bar length (of 2 cm scalebar) with the formula:

$$L_{bar} = \frac{6779 * 236}{L}$$

2. Make a bar with the length $= L_{bar}$