Ucamco

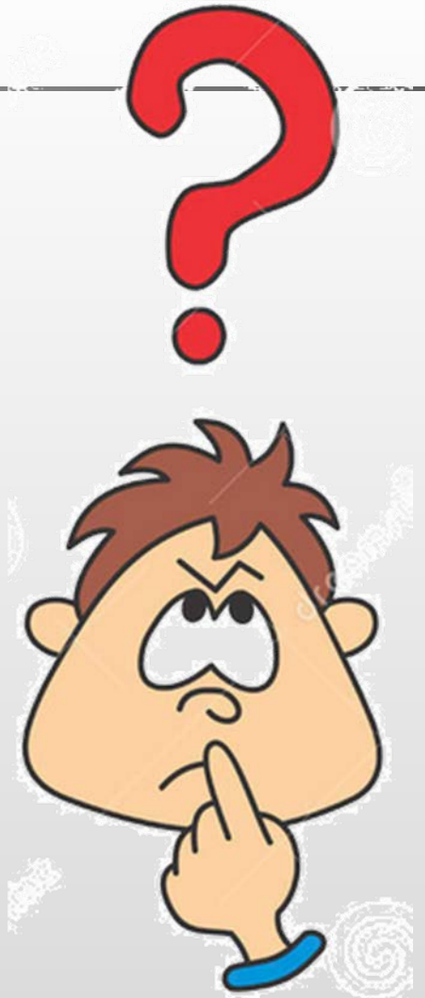
Former Barco ETS

UcamX

Secure Etch Compensation

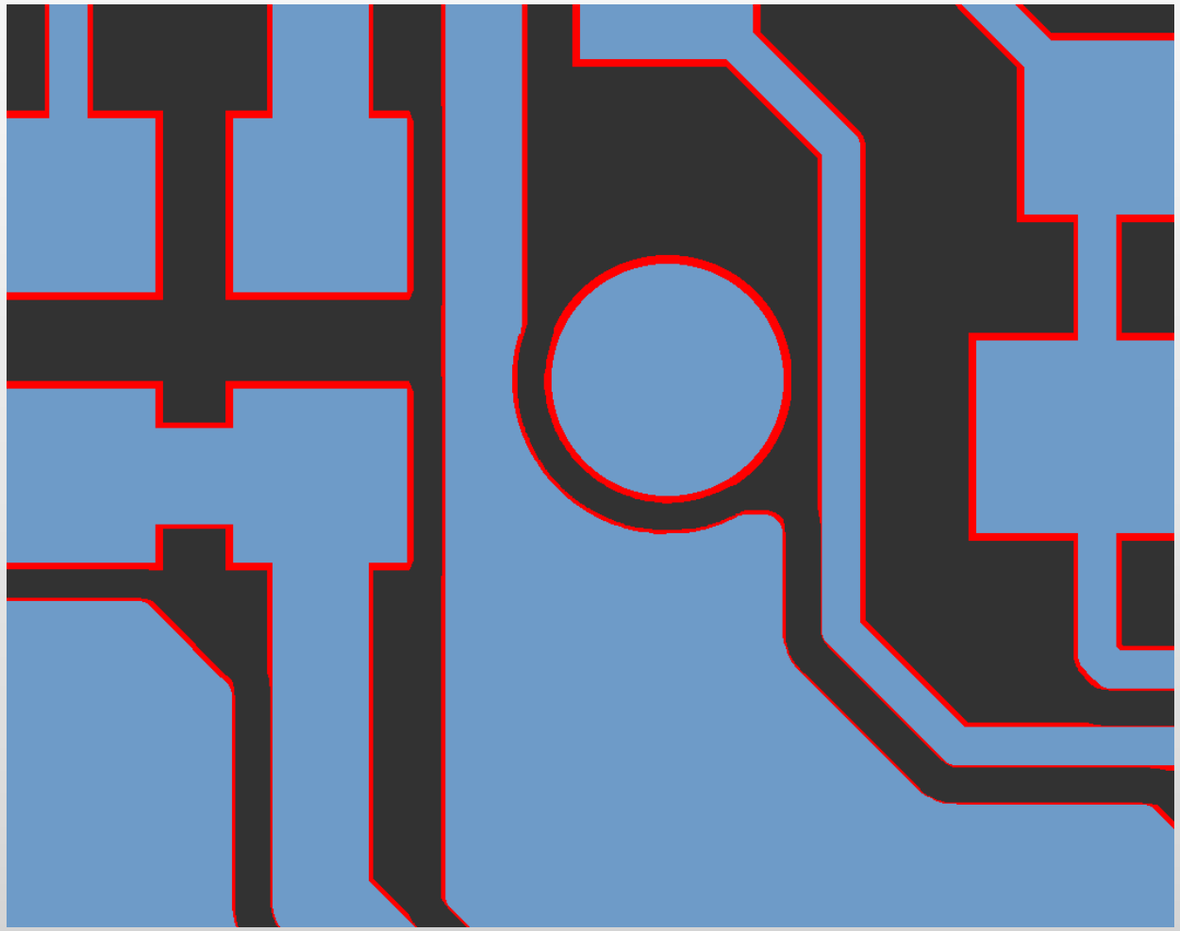
Secure Etch Compensation

- The workings of an etchant and the way it affects the etched copper image is a **complicated** matter
- A second finding is that the **geometry of copper shapes** influences the way the etchant will shape the final copper
- Secure Etch takes this principle as its starting point and is designed to apply different etch factors to the different geometrical shapes in the data
- The geometrical shapes on a board are divided into 4 categories
  - Pads
  - Tracks
  - SMDs
  - Regions (copper areas like planes, shielding areas,…)



Secure Etch Compensation

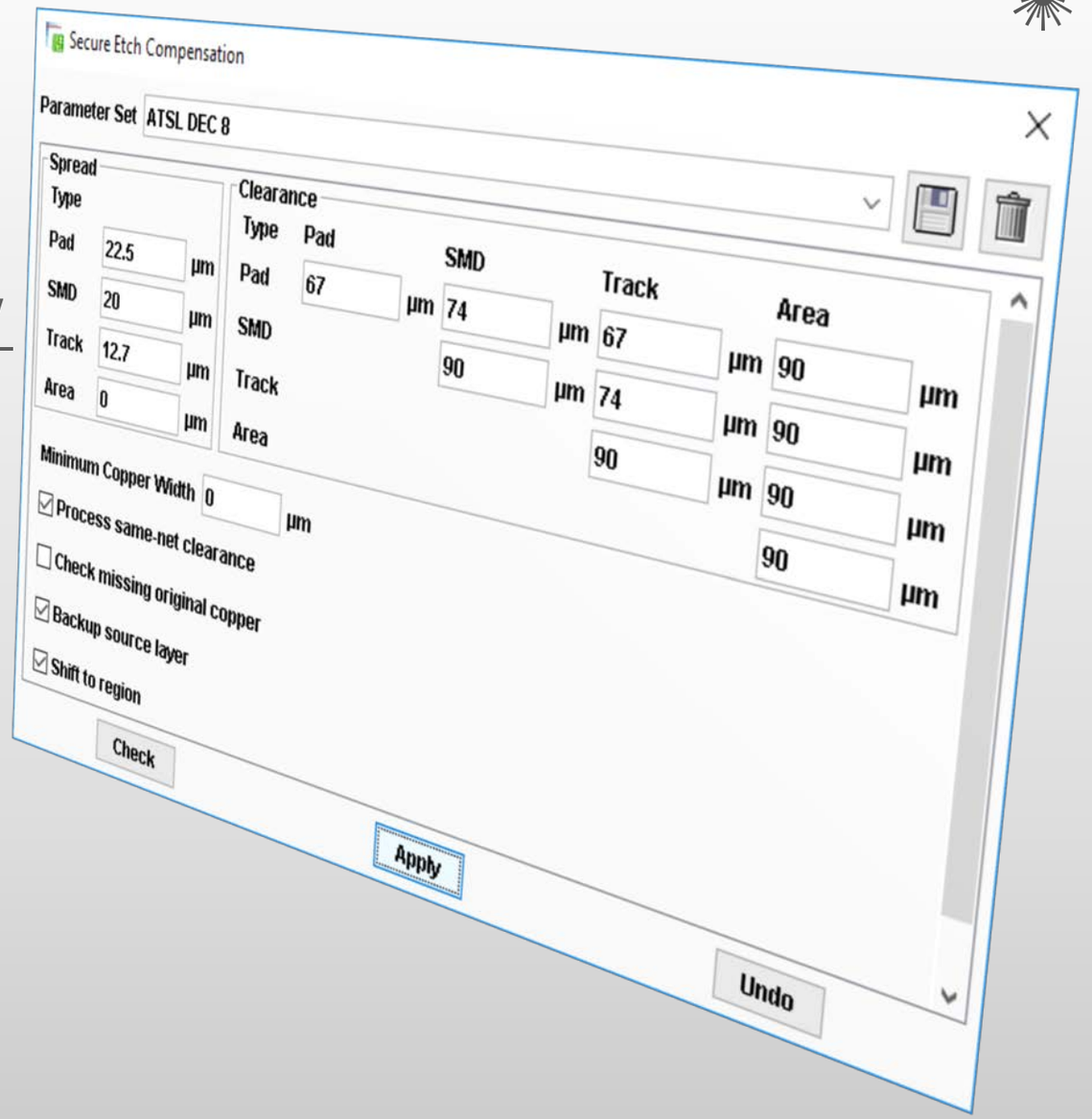
- So Secure Etch Compensation
  - Applies an etch compensation to a feature, based on the **feature type**
  - Allows to impose **discrete clearance** values between **different feature type combinations**.
  - Secure Etch ensures that the compensation values are applied to the **maximum wherever possible**.
  - To respect the required clearance, however, it may **sacrifice** some of the **compensation locally**.



- SEC is fit for intelligently compensating all regular PCB products

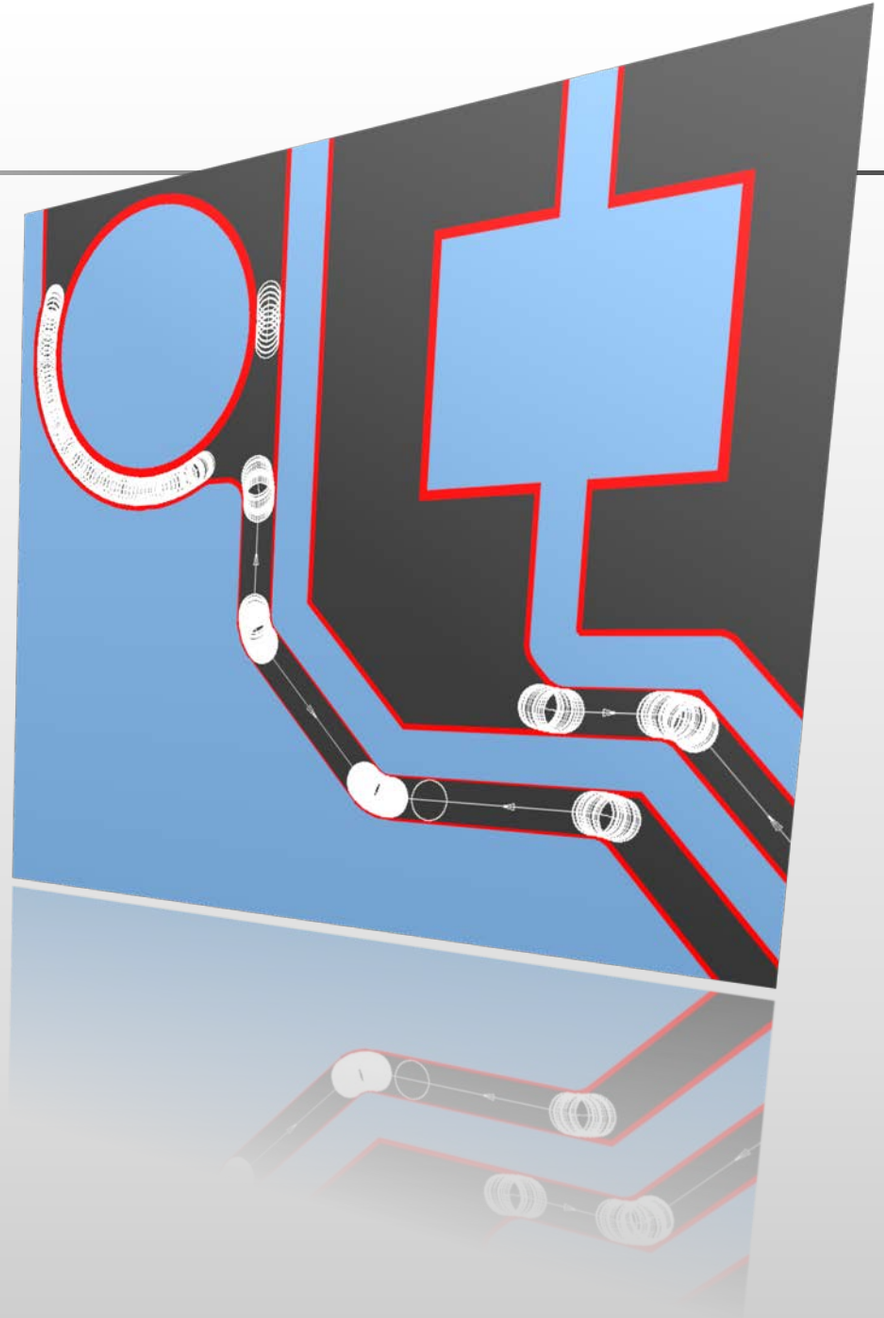
Secure Etch Compensation

- Features
  - **Different compensation values** for different feature types
  - Full compensation applied wherever possible, **local correction** to ensure minimal clearance – all done fully automatically
  - **Different clearance values** for different feature type combinations
  - **Micron** unit of measurement input
  - **Easy-to-use** interface and **uncomplicated** setup
  - Stores and retrieves different Secure Etch Compensation **setups**
  - Original data saved for **on-screen reference**



Secure Etch Compensation

- Benefits
  - Discrete compensation for SMDs to pass end-customer measuring procedures (feature measured at the top of the copper)
  - Track width compensation to achieve nominal values on impedance tracks or coils – no scrap due to impedance fail
  - Ability to leave uncritical large copper areas uncompensated
  - Ability to "trim" copper regions creates more space for compensating nearby tracks or pads
  - Abilility to exclude e.g. Texts or logos from compensation
  - Dedicated undo function



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