

Conflict minerals clampdown

The *Securities and Exchange Commission* has ruled that U.S.-listed manufacturers such as Apple and Boeing must scrutinise the sources of four metals to make sure they don't help fund human rights abuses

ANATOMY OF A SMART PHONE

50
Sn
Tin

Tin aka *stannum* (Latin)
Silvery, malleable metal that does not easily oxidize in air

Source: Cassiterite

Use: Circuit board **solder** and battery **anodes**

73
Ta
Tantalum

Tantalum from *Tantalus* (Greek mythological figure)
Rare, hard, lustrous metal.

Highly corrosion resistant

Source: Columbite-tantalite (Coltan)

Use: **Capacitors** (electrical storage)

Companies must make "reasonable" attempts to find out if materials came from **Democratic Republic of Congo**, where mines are supporting violent armed groups

Screen

Back plate

Circuit board

Ear piece

Camera

Battery

SIM card uses gold connectors

Front cover

Micro USB

79
Au
Gold

Gold aka *aurum* (Latin)
Dense, soft, malleable metal

Source: Nuggets or grains in rock and alluvial deposits

Use: **Connectors** – does not corrode in air like silver and copper

Source: Wire agencies

74
W
Tungsten

Tungsten from *tung sten* (Swedish) meaning "heavy stone"; aka *wolfram* (German). Hard, rare metal

Source: Wolframite

Use: **Vibration motor**