



Recognizing Banknote Patterns for Protecting Economic Transactions

Security Features of Euro Banknotes



The EURion Constellation



The EURion constellation is a pattern of symbols which can be found in a large amount of banknote designs since 1997 as a security measure against digital counterfeiting.

The name "EURion constellation" was coined by Markus Kuhn, who revealed the pattern when he detected that a colour photocopier denied the reproduction of banknotes.

The name is a mixture between the Orion constellation, which has a similar shape, and the Euro's ISO 4217 designation (i.e. EUR).

There are 5 constraints to satisfy:

- At least one EURion constellation is needed.
- It must be completely drawn.
- The orientation is not taken into account.
- The measures must always be the same.
- The drawing colours are green, orange and yellow with some irregularities in order to reproduce the banknote's colours.







