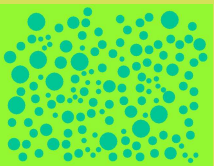


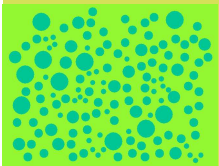
The Fortuitous Dots Code

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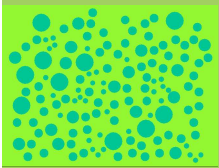
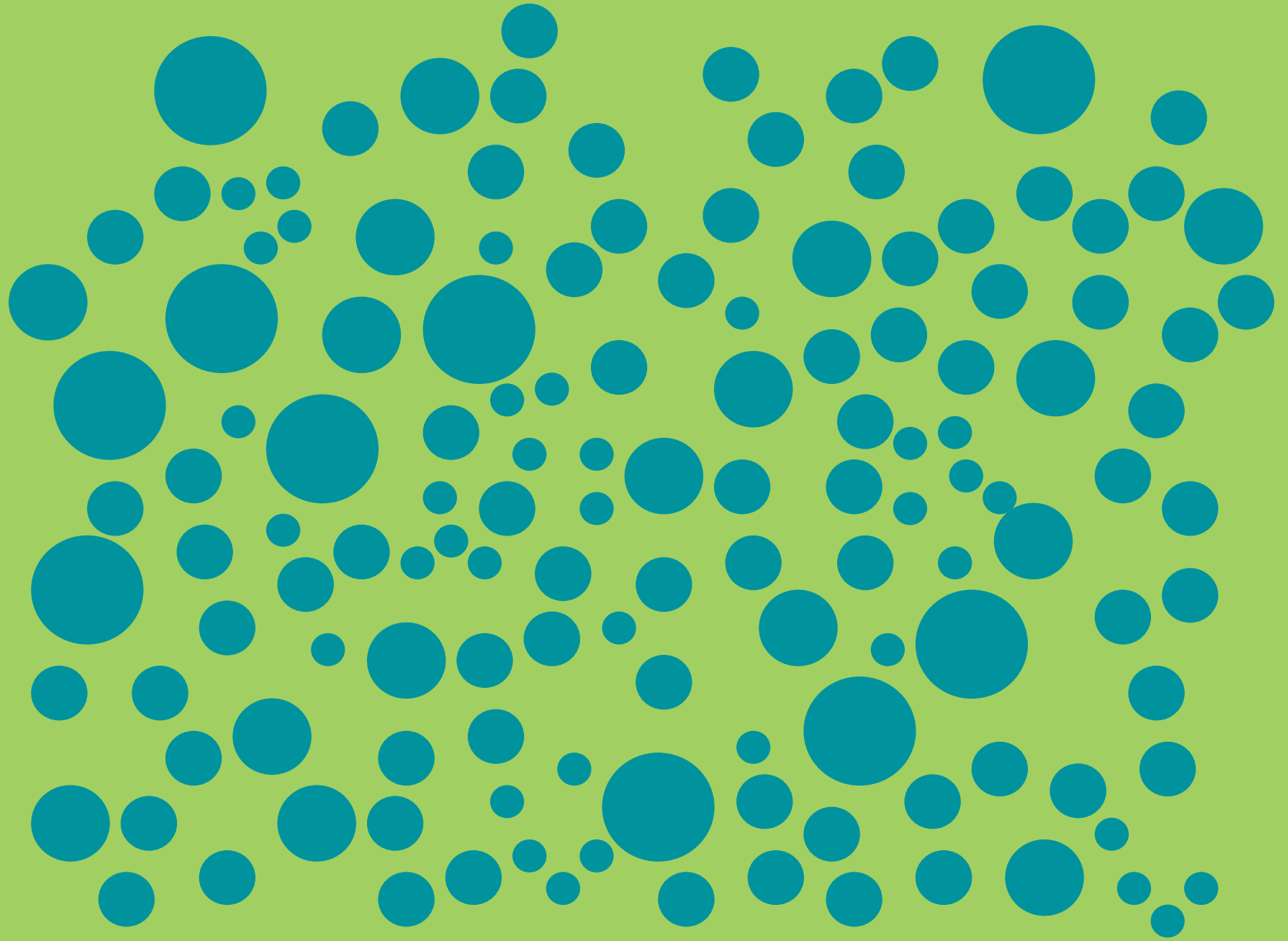


Subject of Presentation :: Coding of any Objects per Instance Cheapest Coding System Possible !

- On the fly coding of plastic packaging
 - Dual coding per instance plus per type
 - Directly at the mould (before/in/after) with
 - Absolutely no cost for numbering
 - Intrinsically safe against fakes
- First registration of codes in the packaging line
 - No additional cost for labelling
 - No binding to removable wrapping films
- Instantaneous identification & tracing everywhere
 - Suitable in any case of presentation
 - Operable at any point in the distribution chain
 - Juridically proof for any liability claim in courts

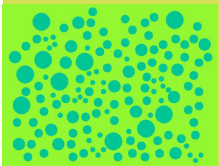


How the Code Looks Alike :: Principle of stochastic Dots Patterns



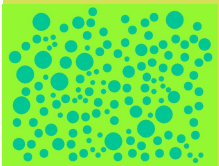
This are the Basic Features !

- Just spotted dots
 - Entirely stochastic in size
 - Entirely stochastic in locality
- Any colour possible
 - Any contrast possible
 - Any light frequency possible
 - Any overlays possible
- Applicable everywhere
 - Directly to the package
 - Directly to the wrapping
 - Directly to the labelling



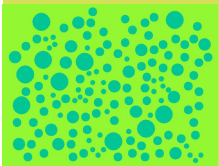
This are the aims to serve !

- Coding directly to the packing tray
 - No administering until filling of packages
 - No glass to the package
 - No printing inks nor thinners close to the food
- Minimal cost for registering and data storage
 - No possibility to tamper the code
 - Highest redundancy against damage
 - Combination of code, hallmark and safety-mark
- Availability of the solution from today
 - No standardisation involved nor required
 - Proprietary system for any application

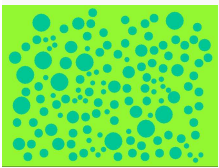
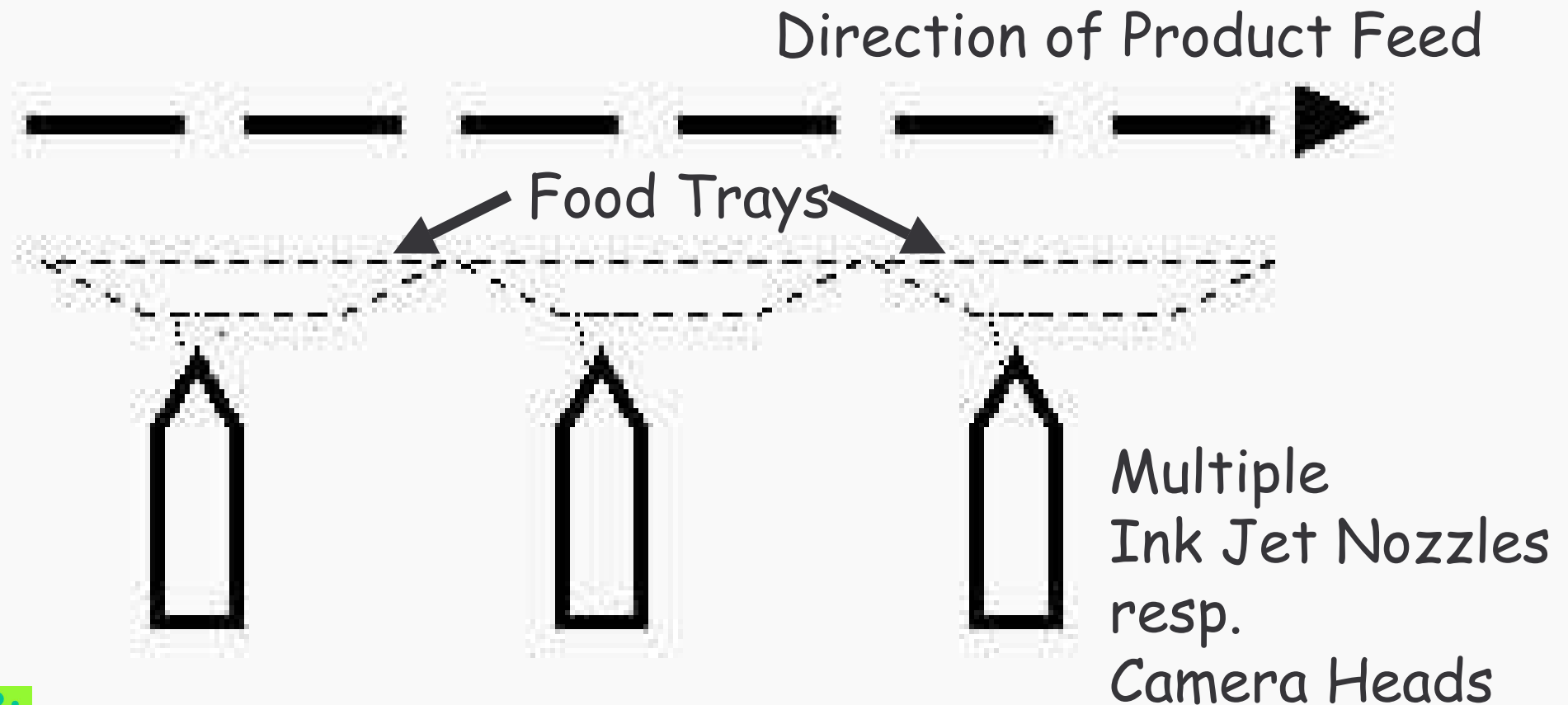


Why a different Approach Beyond Bar-coding ?

- Barcodes require deterministic printing or Laser-marking line per line
- Current printing systems cover object speeds only up to 10m/s relative speed of print heads
- Current coding requires administering numbers from the first printing
- Current labelling systems require change of administration process to include serial numbers

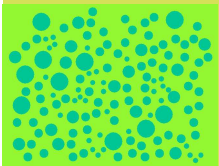


How to Apply the Dots How to Read The Patterns



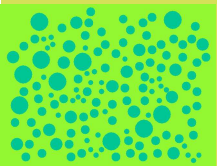
This are the Special Features when Coding !

- Coding of plastic packaging directly at the mould (before/in/after)
- Ceramic ink powders fully bio-compatible
- Stochastic patterns make the code
- Best visibility under films of smear or single film layers
- Just a camera system makes the reading
- Almost no cost for administering
- Absolutely no cost for numbering



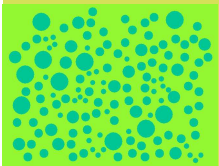
This are the Easy-to-handle Features when Packing !

- All capture, reading, encoding, comparison on-the-fly in real time
- Reading and first registering of code right from the pattern
- No additional labels required, alternative application to label equally possible
- Matching of product data and of package code in any secure data base
- Second read and coding for comparison easy to perform on the fly



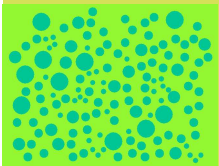
This are the Easy-to-handle Features through all Supply Chains !

- Easy reproduction of code from the pattern at any facility
- Practically zero probability to confound two packages
- Instantaneous recognition from camera-images through the Internet
- No possibility to recognize a fake as an identical original



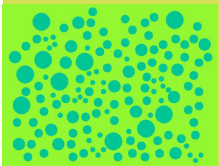
There Easy-to-Comprehend Features Comparable to Deterministic Codes ::

- There is no comparison suitable without access to the database of registering
- There is a distinct segregation from image comparison through coding algorithm
- There is a scalable redundancy concept against any accidental damage
- There is no deterministic modification of the inherent codes
- Future Hacking the coding concept has no impact on safety of the coding concept itself



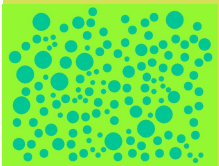
There are Some Mental Challenges to Comprehend the Concept ::

- Easy production of similar pattern from equivalent configuration always possible
- The obtainable code is always actually generated from the captured pattern
- No proof possible that any faked reproduction is a registered original
- No proof possible that there is any second instance with the same pattern and resulting code



Conclusion

- The principle:
 - It is just like looking in the skies at night :
There is no second location with the very same pattern
- The application:
 - It is just spraying ink to a surface :
Dots shall be sparsely spotted in a certain area
- The coding:
 - It is special image processing to ensure speed :
The code is easily obtained with identical parameters
- The security:
 - There is no chance to reproduce identically
- The licensing:
 - System available for licensing



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