Highlights:

1) There is an increasing interest in using chaos on a large number of digital applications.

2) Multiattractor maps may be used to generate new encryption systems by varying their parameters.

3) Digitalization process in chaotic systems may result in total loss of chaotic behavior.

4) Causal and non causal entropies, period's length and MLE were employed to characterize map's degradation.

5) Minimum fractional length that preserves attraction's domain integrity have been determined.