Fuzzy Matching Explanatory Document – not forming part of the UK Link Manual

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Document Control:

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1	Approved		January 2015	Document existing functionality	David Addison

Description of Fuzzy Logic applied within UK Link Systems

1. Document Purpose

This document is intended to describe the process of fuzzy matching which is applied to Meter Serial Numbers within the UK Link System. This document does not form part of the UK Link Manual – it is intended for illustration only.

2. Background

Where UK Link Systems are required to validate the Meter Serial Number, a Meter Serial Number Matching Routine is utilised. The final stage of this routine is referred to as 'Fuzzy Matching', which enables UK Link Systems to identify partial matches with a given Meter Serial Number. The fuzzy match looks for consecutive numeric characters. The 'minimum length numeric character string' (minimum character string) is **three** numeric characters.

This Meter Serial Number Matching routine is used within UK Link Systems in the following processes:
- Meter Reading Validation
- RGMA Validation – Asset in Situ
- AQ Processes – AQ Correction Activities

3. Change Governance

The Fuzzy Matching routine is not defined in the Supply Point Administration Agreement (SPAA) or Uniform Network Code (UNC) and rather is the technical system solution to the above requirement for the matching of partial Meter Serial Number character strings. However, as processes that utilise 'Fuzzy Matching' (read acceptance and meter information notifications (i.e. RGMA)) are referenced in both SPAA and UNC it is proposed that any changes to the Fuzzy Matching routine are **notified** to Users at UK Link Committee and SPAA Expert Group

4. Meter Serial Number Matching Routine

The logic of this routine is described briefly below:

- User provided MSN matches UK Link MSN – Exact Match
- Remove trailing spaces from User provided MSN and UK Link MSNs - User provided MSN matches UK Link MSN – Match
- Remove leading spaces / zeroes from User provided MSN and UK Link MSNs - User provided MSN matches UK Link MSN – Match
- Remove leading / trailing text characters from User provided MSN and UK Link MSNs - User provided MSN matches UK Link MSN – Match
- If remaining character string from the User provided MSN or UK Link MSN is less than or equal to the 'minimum character string' this must be an exact match only.

Where a match has not been found, invoke the 'Fuzzy Matching Routine' logic:
- After removing leading zeroes and spaces,if any three consecutive numeric characters of the UKLink MSN are present in the User provided MSN, in any position, then that number is accepted – Fuzzy Match

5. Out of Scope

Fuzzy logic is not applied to any other asset serial numbers. E.g. Converter Serial Numbers are exact matched only.