



12 digit numbers for Machine to Machine use: impact for telecom providers

Introduction

To address the upcoming shortage in the Dutch numbering plan with regard to 10 digit 06 mobile numbers, the Dutch Ministry of Economic affairs (Dutch: EZ) has decided to make a new number range available for machine to machine communication, starting with 097.

Within this number range two possible sub ranges are made available: a 12 digit 0970 range for inter-network usage, and a 0979 range for network internal use allowing for a free number length definition.



Timelines and urgency

The updated EZ Decision states that the new M2M range (0970) is made available for use by operators per 1st December 2011.

The Decision furthermore states that the usage of numbers from the new M2M range will become mandatory (i.e. obliged by law) for new business M2M applications per 1st March 2013. For consumer M2M applications (e.g. dongles) the obligation to start using the new M2M number range will start 24 months later, i.e. per 1st December 2013.

It is furthermore explicitly stated that the lawful obligation to cater for number portability applies to the new 12 digit M2M range as well.

Although the use of 12 digit telephone numbers are still allowed within the international standards¹, there are various areas within a telecom operator's network and IT infrastructure which may be incapable of processing 12 digit telephone numbers.



IT related challenges for operators

Within the IT environment, areas that may cause problems processing 12 digit numbers include customer self-service portals, customer care systems, billing infrastructure, provisioning systems, and number portability infrastructure. The root cause of problems in these areas is often related to the implicit assumption that a Dutch telephone number is always 10 digits long. Attempting to process 12 digit numbers in the existing infrastructure without making the necessary changes could have severe consequences, which may vary between partial billing outage and service outage for 12 digit numbers.

Network related challenges for operators

Especially trying to establish a circuit switched data call from or to a 12 digit number may cause unexpected effects, both in the network, but as stated earlier also in the IT and billing infrastructure. This problem applies to both mobile and fixed networks, both domestically in The Netherlands as well as in other countries.

¹ ITU E.164 standard states a valid telephone number may consist of 15 digits maximum.



For mobile networks additional problems may arise when 12 digit Dutch M2M devices attempt to communicate from a roaming position in another country.

These roaming related problems may be caused by limitations in the IT and/or network infrastructure of the roaming operator partner that hamper the processing of 12 digit numbers.

The Dutch mobile operator will therefore have to make special arrangements with all roaming partners in order to guarantee the same roaming coverage for 12 digit numbers as for 10 digit numbers.



What if no action is taken?

Some operators have brought forward the argument to postpone the necessary investments related to 12 digit support until the Operator's Marketing department has launched plans to address the M2M market actively.

This rationale is unfortunately flawed, because 12 digit related network and IT problems may also occur in the home network when any of the home network subscribers sets up a circuit switched voice, data or SMS communication with (or is contacted by) a 12 digit number from another Dutch network.

Conclusion

For the reasons stated above, the Dutch EZ Decision has potential impact on all Dutch fixed and mobile telecom providers, (Mobile) Virtual

Network Operators, and service providers, and may even cause impact in other countries.

Because the EZ Decision allows the usage of 12 digit numbers for M2M communication starting 1st December 2011, and enforces the use of 12 digit numbers by law per 1st March 2013, an analysis of the own infrastructure on the short term is advisable.

VDVL services for introduction of 12 digit numbering plan

VDVL can offer the Operator different service packages to facilitate the Operator to start the support of the 12 digit numbering plan, e.g.:

- Quick scan/impact analysis
- Requirements definition
- Re design
- RFP support
- Implementation support

It goes without saying that service packages may be combined to offer the right service to the Operator.

Why VDVL?

Through its long and extensive project experience in Telecom Operator environments, both in the Network and in the IT/BSS area, VDVL has gained a deep and thorough understanding on how numbering plan changes may affect processes and infrastructure within a telecom provider. This experience makes VDVL the ideal operator partner to identify IT and network vulnerabilities in an efficient and effective manner, in order to allow operators to make the necessary changes to support the new number range correctly and without problems.

For further information about our references and experience, please visit our website

<http://www.vdvl.nl>

For further information you may also contact

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