



Towards World-class Telecoms through

TRAnsparency
in Competitive Environment.

Numbering is a vital issue in any telecommunications market but particularly when it moves from monopoly to competitive supply. The opening up of the market and the increasing demand for telecommunications services led to a need for a sufficient pool of numbers to be made available for operators in the Kingdom. A restricted pool of numbers creates a barrier to market growth and innovation.

Before 2003, the national operator, Batelco, controlled telephone numbers in Bahrain. There was a six-digit system for fixed line numbers and a seven-digit system for mobile numbers. As soon as competition was introduced, control over all national numbers was placed with the TRA to administer fairly in the best interests of consumers and operators. Issues such as the quantity of numbers each operator is allocated, the desirability of particular ranges (some are more memorable or have particular associations) and the possibility of numbers conveying information to customers on types of service and price of calls to them are all important in determining the numbering plan and dealing equitably with operators. In order to achieve this, a consultation document on numbering was issued in February 2003.

Consultation on numbering

The consultation document discussed detailed measures for the allocation and structure of telephone numbers in Bahrain and proposed

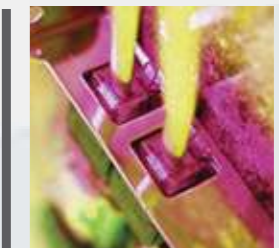
an extension of all numbers to an 8-digit format. The key feature of the 8-digit format is its stability. It secures a pool of a hundred million numbers for Bahrain, which should satisfy present and future demand. The proposals drew on international experience of numbering systems and changes.

The proposed plan also dealt with the migration from the existing numbering scheme to the new one. The key here was to cause as little disruption as possible to consumers. The consultation led to a seven-month period of discussion and refinement, after which the National Numbering Plan for the Kingdom of Bahrain was published in September 2003. The plan established the new 8-digit numbering scheme for all telecommunications in Bahrain from 1st December 2003.

The old numbers ran in parallel with the new 8-digit numbers for a period of six months, giving people time to become familiar with the new system and to change signage and stationery. By 1 June 2004, only the 8-digit numbers will be operational.

How the plan works

Under the plan, all current geographic numbers will begin with the digits '17' followed by the six digits of the existing number. These are numbers allocated to a known fixed location. All current mobile numbers will begin



National Numbering Plan

The Authority shall have the power to prepare and follow up the execution of the national numbering plan and assigning numbers to licensed operators in accordance with such plan.

SECTION (3) (c, 12)

with the digit '3'. Batelco mobile numbers will begin with '39' as existing seven-digit numbers began with '9' and MTC Vodafone Bahrain numbers will begin with '36'. There are a million numbers in each subset 'XX'.

Under the new scheme the first one or two digits will show what type of service the consumer is calling. They are as follows:

rate services in which the charge made covers both the call and some further, usually content-based, service. This number group will be subdivided, so that subscribers can estimate the rate they are likely to be charged by looking at the first two or three digits of the number. The emergency services number 999 will remain unchanged. Figure 4 illustrates the number bands through colour coding.

00	international prefix
10000000 to 19999999	Short codes and geographic (existing Batelco numbers start '17')
20000000 to 29999999	geographic
30000000 to 39999999	'find me anywhere' - non-geographic, eg mobile (Batelco mobile numbers start '39' and MTC Vodafone Bahrain numbers start '36')
40000000 to 49999999	reserved for future use
50000000 to 59999999	corporate use
60000000 to 69999999	reserved for future use
70000000 to 79999999	geographic
80000000 to 89999999	special services
90000000 to 98999999	premium rate services
999	emergency calls

In the Plan, numbers beginning with the digits '01' to '09' will be reserved so that International calls can easily be identified. Ranges starting '1', '2' and '7' are reserved for fixed line geographic codes. Initially some numbers in the '10' to '16' range, '18' and '19' will not be available because existing short code numbers begin with these digits. Range '3' is reserved for non-geographic numbers, including mobile numbers, where the number follows the user rather than being allocated to a particular location.

Numbers starting with '8' are allocated to special services in which the tariff paid by the user is collected in the telephone bill, but some part of that tariff is shared with the provider of the service delivered via the number. Numbers starting with '9' are premium

Migration to the new numbering scheme

One of the primary considerations in preparing the Plan has been to minimize the impact and the cost of migrating from the current plan to the new one, both for Batelco and for users. With the TRA's plan, migration to the new numbering scheme is relatively simple technically, and users can easily translate their old numbers into the new ones.

A six-stage migration approach aims to achieve a smooth migration.

Before December 2003. The telecommunications industry (Batelco, the TRA and MTC Vodafone Bahrain) worked together to publicize the new numbering

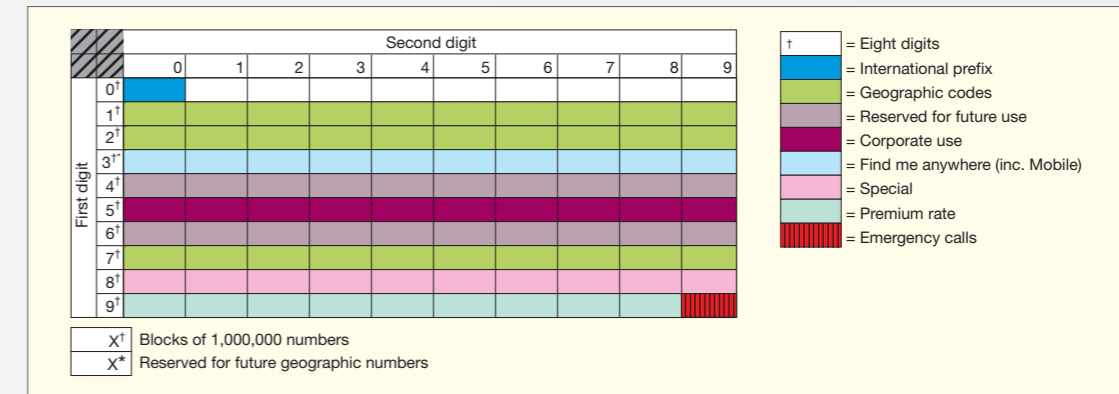


Figure 4: How number blocks are allocated to services

system, the timetable for change, and to make subscribers aware of how it affected them. This was 'The Numbers' campaign.

December 2003: At this point, the new numbers went live and operated in parallel with the old numbering scheme.

From December to end May 2004 - parallel running: During this period, both the old and the new numbers will work for subscribers. This is an opportunity for subscribers to become used to the new system and to change signage and stationery.

1st June 2004: At this point, the old numbers will be disabled and only the new numbers will work for subscribers. All existing Bahrain numbers will start with '17' or '3', international numbers with '00' and emergency services remain as '999', leaving all other initial digit ranges available.

After 1st June 2004: At this stage, if a subscriber tries to dial an old number, they will receive a recorded announcement that the number has changed, together with instructions on how to derive the new number.

The steady-state: As the old number prefixes are re-allocated, the recorded messages will be discontinued until eventually all numbers follow the new Plan. At this stage the Plan is fully implemented.

Management of numbers and the Conventions

The National Number Plan includes the Numbering Conventions for the Kingdom of Bahrain (the 'Conventions'). These Conventions are a set of principles and rules relating to the use and management of numbers under the Plan. They also govern licensees' own numbering plans. It is a breach of any license granted under section 3 of the Telecommunications Law for an operator to have a numbering plan that does not comply with these Conventions. Each licensee is required to submit their numbering plan to the Authority for approval, and to report on their number usage.

The Conventions are revised from time to time by the General Director of the Authority, after consultation with the relevant licensees and interested parties. The Authority will publish information on the Plan and the current usage of numbers on its website (www.tra.org.bh). Operators are required to submit an Annual Numbering Return to the TRA. This contains information up to the end of the calendar year, and should usually be submitted within one month of the end of that year. The Authority will also prepare an Annual Numbering Report on the organization and use of the Plan for annual publication, usually in April.