



CUSTOMER PROFILING

THAT

MAKES A DIFFERENCE

INCREASES IN PROFIT

GO HAND IN HAND WITH

UNDERSTANDING MOBILE SUBSCRIBERS

1. Executive Summary

Mobile subscriber segmentation and profiling by network and demographics are vital when deciding on marketing campaigns or business development activities aimed at mobile users.

This white paper focuses on the use of effective business intelligence to segment customer information into clearly structured customer profiles, which enable improved and easier management of campaigns, including the monitoring of their impact in real time.

Using the *InTelestage™* family of products as its inspiration, this paper will show how operators can identify advanced patterns of customer behaviour using the available data. Once identified, profiles can be used easily to increase benefits for the subscriber and, ultimately, the ARPU and APPU for the mobile operator.

In addition, this paper will look at prepaid customers, who, today, represent a very significant segment of all operators' customers. Prepaid subscriber data is, however, often viewed less effectively than post-pay information, relying on tools designed and sized for post-pay support.

2. Introduction

Up until the past couple of years, increasing the number of subscribers on a network has been the main route to significant revenue growth for operators. The only concern was keeping pace with subscriber increase through infrastructure expansion and upgrade.

Today, however, with mobile penetration rates rising as high as 90% in developed markets, increasing profits by increasing the subscriber base is no longer the main ingredient in the recipe of success; the battle to attract new customers is now fought on harsher grounds, as mobile operators wrestle with tremendous competitive pressures, diminishing numbers of potential customers and unforeseen market trends. In order to keep profits swelling, therefore, means constant reconsideration of marketing strategies, tackling new challenges, seizing opportunities and making the most of unexploited market breaches unveiled by technological innovations.

There are a number of ways in which a mobile operator can secure profits, most of them requiring thorough, detailed, up-to-date knowledge of the subscribers. Three of the most effective are:

- ✓ Using efficient prevention methods to ensure that the number of subscribers remains stable or grows, reducing customer migration to the minimum
- ✓ Promoting additional and ‘like-for-like’ services, which can directly increase ARPU and APPU. This applies to increased usage of new services by customers. Importantly, many ‘like-for-like’ revenue increases can be achieved without additional infrastructure
- ✓ Maintaining profit-orientated cost and charging models based on total business intelligence. Lifetime-cost models and individual-value models need to be the business models of today: identifying and managing pricing, predicting the effects of competitive pressure and implementing effective counter measures

The smart deployment of services ensures increased benefits to the full extent. The thing mobile operators need to know is what, when and to whom to promote in order to maximise on the full potential of the market.

3. Increasing Customer Retention Rates

Throughout the world, mobile competition is fierce, with potential new subscribers becoming fewer as tariffs drop and operators become caught in an increasingly urgent and generous ‘incentives’ competition to attract new customers – even from rival networks. At the same time, they have to do their best to retain their existing customers, since unforeseen market trends often catch mobile operators unaware. Migration is difficult to predict, as it represents a complex and conscious decision driven by a

number of factors, including: costs, service levels, peer-group pressure and advertising. Once a customer leaves a network for another operator, it is very difficult, if not impossible to attract them back to their original network. This is further exacerbated in more mature mobile markets where it is very difficult to make up for any subscriber loss by acquiring new customers, especially when the number of churners reaches, or exceeds, 30% of the entire customer base. In developing mobile markets, too, operators need to retain existing customers because of the shrinking numbers of uncommitted subscribers.

It is, therefore, crucial that retention measures used in combination with loyalty campaigns hold paramount importance in mobile operators' development plans if they are to maximise on the untapped revenue potential of their post-pay and, importantly, their prepaid subscriber bases.

Retention measures can be applied proactively to counteract and prevent customer migration before the effects potentially spiral out of control. When successfully applied, retention campaigns directly impact churn by cutting it down to a minimum to maintain a stable subscriber base and thereby keep profits rising.

Loyalty campaigns, like retention activities, are based on key performance indicators (KPI) that may point out the possibility of churn. Subscriber loyalty is vital for mobile operators, and knowledge KPIs enables them successfully to manage and deliver on expectations. It enables operators to be competitive and to apply measures like reducing customer costs, adjusting billing or improving poor service. Loyalty schemes can be introduced, which grant generous incentives to subscribers, and offer the best method to boost customer satisfaction and even increase usage. Loyalty is especially profitable since it is much cheaper to retain a customer with a US\$20-30 annual incentive, than to secure a new customer, where costs to attract a new subscriber to the network can be as high as US\$200-300.

In order to increase customer retention rates, operators need to apply the proper retention scheme and loyalty campaign to the appropriate subscriber segment. To hit 'the bull's eye' with their retention campaigns, acquiring accurate profiling data and making successful online predictions on migration and customer movement is paramount. Accurate modelling can be used to provide information on high-value customers, and to predict shifts in the customer data in advance – by using accurate profiling in combination with efficient countermeasures to deter potential churners.

With respect to retention, business intelligence employs the following steps:

- ✓ Segmenting the customer base in degrees of profitability, granting individualised status to subscribers according to their value to the network, e.g. bronze / silver / gold status
- ✓ Identifying and singling out high-churn segments
- ✓ Taking proactive decisions and deploying tailored campaigns and support schemes that drive retention, reduce churn, and thus achieve a high success rate

The deployment of these simple stages ensures the effectiveness of the retention campaign. Any retention campaign, when based on the accuracy of the segmentation and profiling activities, maximises the success rate.

4. Increasing Profits through ‘Like-for-Like’ and Additional Services

As mentioned above, potential new subscribers are extremely hard to attract in saturated, advanced mobile markets, which are already dealing with this issue, with developing markets very soon to reach the bottom of potential-customer reservoir. Therefore, mobile operators cannot rely anymore on market growth alone to secure their business profits. From now on, success will be about identifying the most valuable customers, keeping them loyal and promoting ‘like-for-like’ and additional services, thus encouraging consumption and increased usage. The range of services available to the subscriber has increased tremendously since the early days of mobile telephony, with each new service implemented representing a new opportunity to increase profit. While keeping the pace with technological change, mobile operators must know how to take advantage of these services, by studying how best and to whom they should be delivered.

Nonetheless, from implementation to profitability, a new service still has a long way to go, and information on subscribers is vital in order to make the service a success. Stimulating use of ‘like-for-like’ services must also be based on a variety of factors, which all boil down to a single, vital issue: knowing the customer. Knowing the customer does not mean simply gathering data on customers, which is, nevertheless, important. What is most important is that the data must be thoroughly analysed and considered, in order to discover the latest market trends and tendencies. For instance, a campaign focused on promoting SMS requires information on SMS usage from a specific market segment – history, drops/increases in usage, usage peak times, as well as predictions of future use. This information is vital for considering facts like: which customers to favour, which to encourage, what services to sell more and to whom.

Segmenting subscriber data allows the extraction of relevant information, on which more detailed customer profiles can be based. So, what use is a subscriber profile? A customer profile corresponds to a specific segment identified within the subscriber base and provides advanced, valuable information according to issues like length of service, subscriber value, or degree of usage of services. The number of different profiles identified is based upon significant statistical characteristics and the use of complex mathematical formulae and algorithms. The use of trends and history are also useful indicators. Thus, by using profiles, mobile operators can identify potential customers for new services, and valuable data on customers likely to increase usage of ‘like-for-like’ services can help mobile operators detect which subscribers are worth targeting in a marketing campaign.

Overall, the results of stimulating the use of ‘like-for-like’ and additional services are numerous, and the chances of success increase when the potential user is accurately targeted. Customer retention and increasing loyalty also go hand-in-hand with stimulation and extension of the use of existing services.

5. Segmentation and LTV

Employing segmentation and profiling is a major help in drawing up relevant indicators as to the value of the customer. A significant indicator, which has been devised as a method to identify the value of a customer for the network is the Life Time Value (LTV).

Applied to mobile environment, the LTV of a customer represents the net profit a mobile subscriber is expected to bring to the operator during their ‘lifetime’ with that operator. LTV is a relative concept, often hard to measure and predict, as it depends on a number of variables, such as method of acquisition or competitive pressure. There are two components that are taken into account when determining LTV: the earnings (the monthly profit from the subscriber) and LOS (Length of Service, or the lifetime of the customer with the operator).

LTV is constructed with mathematical predictions of customer value based on historical data. This mass of data requires well-defined indicators and data refiners in order to obtain a realistic glimpse of customer profitability. Once determined, however, the LTV can offer operators an important tool in predicting the potential success of various marketing campaigns. LTV can be helpful when running comparative approaches on different customer segments, and trying to shift such segments to a higher degree of profitability.

Analysis of customer profiles brings key success factors and LTV awareness can help mobile operators to act at the right time for each customer to stimulate their continuation with the network, and hence their LTV, just at the moment when a subscriber approaches the predicted end of their current commitment with that operator. Investments in retention campaigns can be more cleverly made, as LTV helps determine or retention campaigns can be allocated to increase success, at moments when the subscription duration is likely to end. Cleverly run marketing activities can stimulate creation of customer value, by focusing campaigns on most profitable subscribers, at the right time.

6. Employing Effective Marketing Tools Helps Mobile Operators to Secure Profits

Mobile operators are adapting their approaches to managing costs and charging models to make full use of the existing infrastructure to deliver maximum results in terms of profit. There are effective ways for the mobile operator to increase APPU by working with the vast amounts of data available on customers using appropriate business intelligence methods and solutions. The data-gathering ability of latest solutions and infrastructure is astounding, due to major recent technological progress; as said previously, acquiring data is no longer the issue; it is the selection and use of that data, in order to gain valuable knowledge about customers, which is crucial.

Segmentation and profiling offer the best means of maximising the use of subscriber data. Using intelligent segmentation tools, splitting up the available data into segments, according to a variety of implemented criteria, and based on existing data and surveys, enables the operator to gain first-hand, valuable, in-depth knowledge. Segments can be split further into sub-segments, depending on the profitability of the subscribers for the network. This enables a more detailed evaluation of their network behaviour patterns and calling traits and, hence, a more accurate assessment of their value for the operator.

Using these segments, profiling refines data in order to help analysis, enabling a more accurate picture of a variety of characteristics to be obtained, such as bad debt, potential service migration and up-selling, revenue recognition and fraud prediction. The information revealed may present the operator with a range of opportunities, as unexploited market segments are identified and the operator's existing range of services and tariffs can be adapted to fit the emerging, 'real' data.

Once uncovered, profiles based on existing data can help the operator to promote the usage of network services, through smart, sharply targeted:

- ✓ Marketing campaigns, which can promote additional and 'like-for-like' services to existing customers more successfully
- ✓ Loyalty programmes, designed to improve the image of the operator and increase customer retention
- ✓ Customer retention policies applied to real-life facts and issues

Furthermore, profiles can also be used in a predictive manner, in order to identify statistical usage patterns common to profitable customers or customers who may be receptive to new services.

Segmentation and profiling tools are, therefore, crucial to the business success of today's mobile networks. These tools synthesize the appropriate information on the subscriber base, filtering it through advanced data mining and making such business intelligence indispensable in securing profits now – and in the future.

7. Case Study

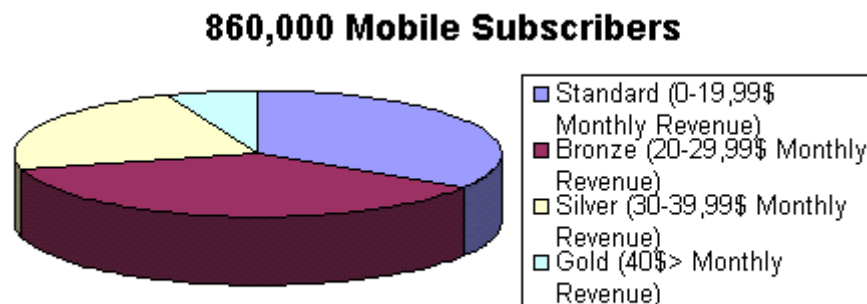
Mobile operator ‘X’ provides its services in an advanced mobile market, with limited opportunities for further mobile penetration, where more than 90% of the population are subscribed with an operator. The market is divided between three operators, with mobile operator ‘X’ being the market’s number two, with a market share of around 35%.

Due to market saturation, the growth for mobile operator ‘X’ depends more and more on customer retention, promoting new services and maximising the usage of ‘like-for-like’ services.

However, because mobile operator ‘X’s prepaid customer segment, which represents 78% of its entire subscriber base, is being impacted by the aggressive campaigns of the two competitors, a campaign to increase customer retention has become necessary. The marketing department has decided to address prepaid customer retention through a loyalty campaign offering ‘gold’ support and a handset subsidy to the high-value customers. The objectives of the campaign are customer retention, especially of the high-LTV customers, and usage maximisation of the network’s most profitable services.

In order to test the efficiency of the campaign, mobile operator ‘X’ decided to run it for two months within a major metropolitan area, before taking the campaign nationwide.

Based on network and billing information gathered over the previous two years, subscriber profiling was employed to refine data according to monthly average usage, revenue, years of service and LTV. In addition, mobile operator ‘X’ used information about its prepaid customers’ ages and residential locations, obtained during a campaign that had offered generous bonuses to subscribers who had provided such information. The profiling tool identified almost 860,000 prepaid customers living in a city with 3,500,000 inhabitants, segmented as described below.



As a bonus for using mobile services, a differentiated customer support level was applied to subscribers, according to the segment to which they belonged. Because the

bonus was reviewed every six months – initially being based on the previous six months' usage – customers were also encouraged to maintain their usage level.

During its analysis of a known customer population, the profiling tool automatically identified significant statistical characteristics and used complex mathematical formulae and algorithms to rate each customer. In this case, the profiling tool analysed the behaviour of the customers in the segments and sub-segments obtained, converting the results into customer profiles. Particular attention was paid to high usage SMS, international roaming and peak time voice services, because these services were identified by the operator as being the most profitable.

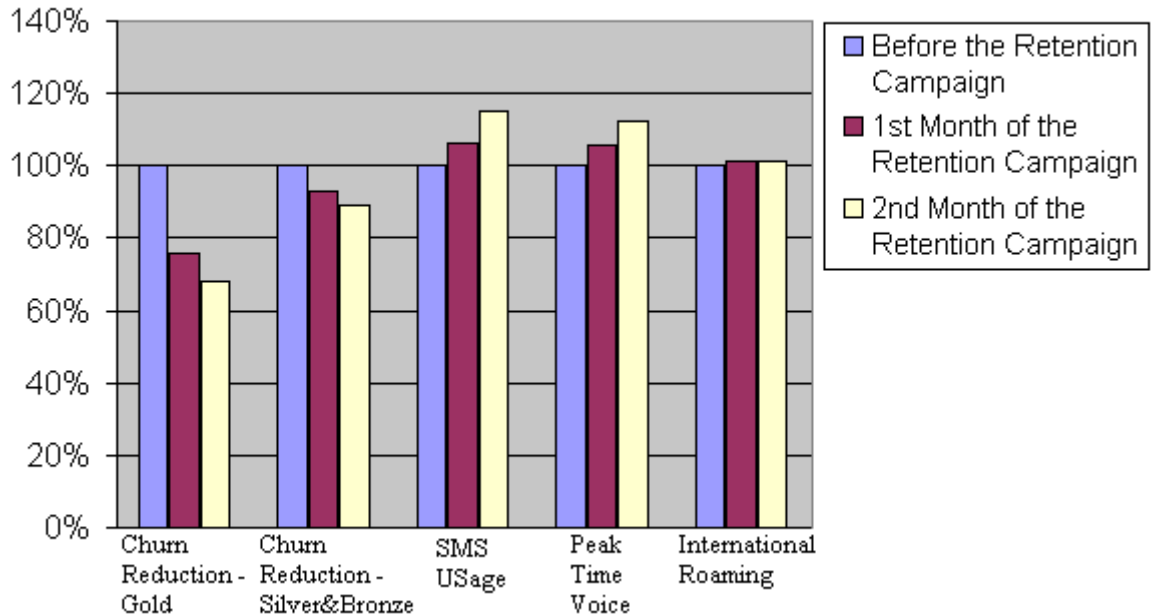
Statistics also showed that some customers would remain with the network in any circumstances, whereas some customers would leave the network regardless of the operator's schemes. As a result, mobile operator 'X' decided that the customers in the first segment (*Standard*) would be informed about the benefits of the campaign, although no discount would be applied to them, the aim being to encourage these customers to spend more and thereby move into a higher spending segment.

Based on the profiles generated, a customised campaign was run for each profile, with Bronze, Silver and Gold segment categories. The offer consisted of 5%, 10% or 15% discounts applied to the tariffs. Because of the low value of the customers in the first segment, this campaign did not target them. On the other hand, special attention was given to the segment that generated revenues of more than US\$40 a month. The retention tactics consisted of granting a US\$80-handset subsidy to each customer in the Gold segment, with a new subsidy promised the following year.

The campaigning module integrated in the profiling tool automatically managed the campaign communication aspect, by sending each user a customised SMS or e-mail to inform them about the benefits being received as a result of the retention campaign. The costs of the campaign in terms of promotion were, as a result, insignificant. Feedback was received by phone, and clients were provided with assistance from a customer services agent, when necessary.

After two months, mobile operator 'X' reviewed the results of the campaign, observing the following:

Results of the Retention Campaign



- In the Gold customer segment, customer migration was reduced by 24% in the first month of the campaign, and an additional 8% the following month, compared to the monthly average of the three months preceding the campaign
- In the other customer segments (Bronze and Silver), customer retention had improved by 7% at the end of the first month, and 11% by the end of two months
- SMS services usage volume had increased by 15% at the end of the two-month period
- Usages volume of peak-time voice services increased by 12.5% at the end of two months
- Usage volume for international roaming services increased by 2% at the end of the two months

The campaign reviewers indicated that the results showed a success in customer retention, with good results seen in SMS and peak-time voice services. However, for international roaming a new campaign strategy was proposed. Based on this review, the campaign extended successfully on a national scale.

Success, bringing rapid ROI

By using profiling and segmentation, mobile operators can identify the pillars upon which to build their business development strategy for the future.

Thus, profiling and segmentation can be successfully employed as efficient prevention methods to ensure that the number of subscribers remains stable or grows. Promoting

additional and ‘like-for-like’ services is facilitated, triggering a direct increase in the ARPU and APPU. Profiling and segmentation can help maintain profit-orientated cost and charging models based on total business intelligence.

Price management can find profiling and segmentation of particular use; costs and tariffs can be more suitably and reasonably tailored to meet the demands of different customer segments. Decreases or increases in LTV can help highlight competitive pressures, enabling the operator to respond and counteract such pressures more readily.

The impact of new services can be measured by calculating LTV prior to and after their implementation, with mobile operators able to gain valuable information on identifying potential profitable services per segment.

Furthermore, mobile operators are able to gain invaluable data from monitoring service usage and profitability within user segments, as well as from monitoring service life cycles. Such information can be used when running in-depth studies on APPU, ARPU and LTV.

7. Conclusion

Companies spend billions annually trying to promote brands, services and products on offer, using a host of varied techniques and means, all aimed at boosting APPU.

Where does the customer fit in? Behind the many marketing reports, the customer, often examined in insufficient detail, is reduced to a vague reference in a report, or a statistic in a chart. Corporate development, in spite of in-depth attempts to foresee trends, is often taken aback by unpredictable subscriber movement and migration. In the desire to counteract such potentially unpleasant surprises, profiling and segmentation enable accurate customer prediction through advanced data mining capabilities.

In the document, *InTelestage™ Profiler Product Overview*, an insight into Business Logic Systems’ solution is provided for companies that choose profiling as the method that will enable them to know more about their customers. The document contains a description of the product, providing information on:

- The product **background**, its **description** and **interface presentation**
- Ways of achieving **prediction** and **customer analysis**
- Managing **customer profiles**
- Associating **customer profiles** with **services**
- **Profiler’s analysis tools**, that helps display results into **graphical charts**
- **Campaign management**

For more information, consult the *InTelestage™ Profiler Product Overview*, available on request from Business Logic Systems. Contact:

Address: 3B North Mill
Bridgefoot
Belper, Derbyshire
DE56 1YD
United Kingdom

Tel: +44 177 3827438

Fax: +44 177 3824364

E-mail: info@businesslogic.co.uk

Website: www.businesslogicsystems.com

© 2004, 2008 Business Logic Systems Ltd

3B North Mill, Bridgefoot, Belper, Derbyshire, DE56 1YD, United Kingdom

Business Logic Systems Limited is registered in England. Registered number 3536760. The registered office is 3B North Mill, Bridgefoot, Belper, Derbyshire, DE56 1YD.

All rights reserved. This document or any part thereof may not, without the written consent of Business Logic Systems Ltd., be copied, reprinted or reproduced in any material form including but not limited to photocopying, transcribing, transmitting or storing it in any medium or translating it into any language, in any form or by any means, be it electronic, mechanical, xerographic, optical, magnetic or otherwise.

Unless otherwise indicated, information contained in this document is proprietary and confidential and all copyright, trademarks, trade names, patents and other intellectual property rights in the documentation are the exclusive property of Business Logic Systems Ltd. unless otherwise specified. Companies, names, and data used in examples herein are fictitious unless otherwise noted. The information including but not limited to data, drawings, specification, documentation, software listings, source or object code shall not at any time be disclosed directly or indirectly to any third party without Business Logic Systems Ltd.'s prior written consent.

The information contained herein is believed to be accurate and reliable. Business Logic Systems Ltd. accepts no responsibility for its use by any means or in any way whatsoever. Business Logic Systems Ltd. shall not be liable for any expenses, costs or damage that may result from the use of the information contained within this document. The information contained herein is subject to change without notice.

InTelestage is a trademark of Business Logic Systems Ltd. Microsoft Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries. All other brands, company names and their products may be the trademarks or registered trademarks of their respective owners.

Part number: P-014-06