mobilsense

The Art of Wireless Optimization

Countermeasures to Increasing Cost Trends

When it comes to carrier pricing, wireless service costs are primarily determined today by a single dimension, data usage. In the past, voice, messaging, and data would collectively impact monthly invoice costs. On the surface, this would suggest that optimizations should be easier to perform. Unfortunately, data has become much more challenging to manage than voice usage ever was because traditional optimization strategies and methods are insufficient against the rising tide of data usage. Now, more than ever, powerful analytics and automation are required to curb increasing invoice costs effectively.

As companies expand data pool sizes to avoid overage charges, the correlation between growing data and increasing cost highlights the importance of influencing employee behavior as a critical component to cost containment. Optimization is no longer just about finding the best carrier rate plans and pool sizes to match projected usage.

What is the state-of-the-art in wireless optimization today? It consists of a two-prong attack: First, ensure that your company doesn't pay more to the carrier than what is minimally necessary, achieved through effective pool management. Second, build an awareness of the financial impacts of growing individual data usage throughout the organization.

The following outlines seven countermeasures that companies must embrace to curb growing mobility costs.

1. Implementing the optimum pooling model

Carriers offer two types of pooling configurations. The first is characterized by small pools referred to as pool groups. Pool groups include a limited number of devices (typically 25), which share a bulk quantity of data determined by purchasing amounts in stairstep offerings (50GB, 85GB, 150GB, etc.).

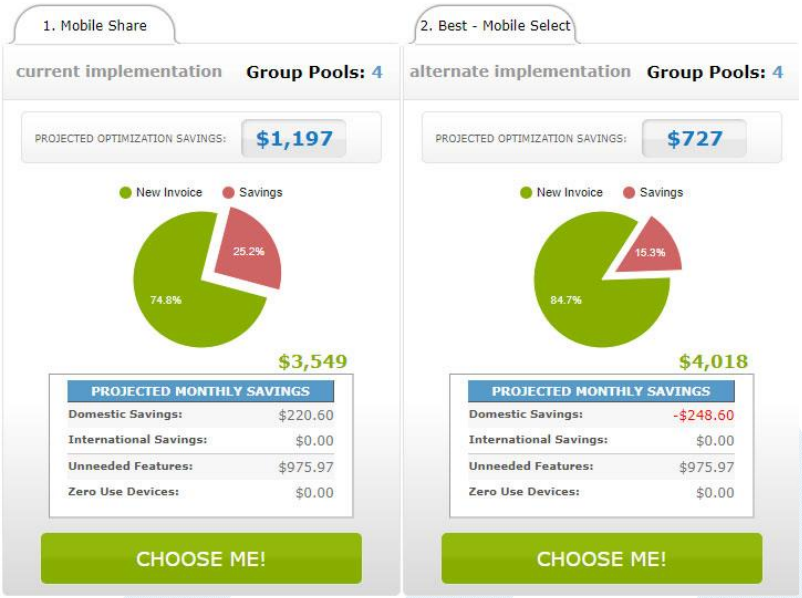
The second pool model is aimed at large pool configurations where each device contributes a small quantity of available shared data (2B, 4GB, 6GB, 10GB per device) towards an aggregate total that is the sum of all contributing devices. There is typically no restriction on the count of devices in these pool configurations. These pools can accommodate up to tens of thousands of devices. This model is referred to as 'cumulative pooling.'

As one might imagine, different pool models come with varying dynamics of pricing along with pros and cons regarding the time and energy required for monthly oversight and maintenance. On the one hand, pool groups will typically yield the lowest cost per GB but also represent the highest maintenance burden. Inattention can quickly push the cost GB ratio above cumulative pooling models when the respective pool groups become

unbalanced over time. Avoiding data overage, and its counterpart, avoiding overspending on unused data, require constant vigilance. Typically, companies with less than 250 devices will find that pool groups yield the best overall economics. Device counts of 350 – 450 can become unwieldy to manage as the number of pool groups grows to the high teens or twenties, making the task increasingly complex in keeping costs down.

The cumulative pools are a better choice for large device counts, and the only viable option for pools with device counts exceeding 500. These configurations are much easier to maintain, and with the proper tools, can be managed to match available data and usage with high precision.

The challenge: Without constant analysis, companies with device counts between 200 and 500 will not know if dynamics have shifted to favor a different pool model. Technology-based algorithms provide by MobilSentry™ from MobilSense make this a simple monthly verification process.



2. Prudent use of unlimited plans

Every carrier offers unlimited data plans, but they come with a much higher price tag and can be limited by device type. They also come with the threat of potential data throttling when exceeding a predetermined usage threshold. Unlimited plans can be a no-brainer for top users when done effectively. The selection of unlimited device candidates requires monthly monitoring, where optimal management will produce a constant churn of unlimited devices to and from the pool. The overall size of pools and a mix of high and low

data users can impact the cutover point between a device residing in the pool or on an unlimited plan.

Also, usage variance on individual devices can lead to swapping the same device repeatedly between unlimited and pool plans over time. Choosing an approach that advocates putting all devices on unlimited plans does reduce constant churn but also results in perpetual over-payment for data usage.

The challenge: While one can form a reasonable approximation of a consistent cutoff point (3.0GB, for example), the line of demarcation is fluid and can even change monthly. Manual calculations will become tedious in determining which devices to transition. MobilSentry™ saves hours otherwise spent using spreadsheets, as it precisely calculates the optimum balance between unlimited and pooled devices monthly.

3. Real-time precision pool tuning

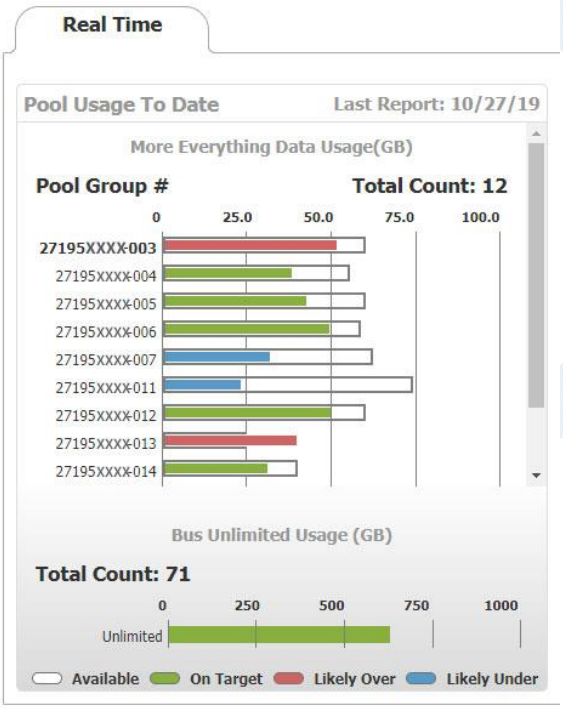
With accelerating trends of data usage, it is no longer enough to only perform retroactive optimization based on the most recent invoice. Today's wireless world demands late-cycle changes to eliminate overage charges and avoid paying for unneeded pool data. Options exist to backdate pool increases, thereby making those newly added GBs immediately part of the total month's pool availability. This is not the case when reducing data. For example, a change on the final day of the billing cycle, increasing ten devices from a 2GB plan to a 10GB, increases the monthly pool by 80GBs (10 x 8GB). The reverse action of reducing ten

devices from the 10GB plan to 2GB plans will only reduce the pool by 2.6GB (1/30th of the same 80GBs) because it only applies to the remaining days in the billing cycle. Reducing data is not retroactive as backdating is only allowed on cases where the plan Monthly Recurring Cost (MRC) increases in the plan change.

Both AT&T and Verizon provide real-time usage information through their standard portals. This data can be extracted daily and deliver an up-to-date perspective through the course of the month on whether data usage is projected to undershoot or overrun the current pool size. Best practice suggests that one sets the pool size at the first of the month to a level that will require some late-cycle additional retroactive pool data rather than finding too late that there is too much data in the pool.

Another option available to those well-versed in pool optimization, where supported by carrier pricing, is to pull devices out of a pool and place them on unlimited plans where the data can be backdated. For example, if your pool is headed towards a 20GB overage and an individual device is approaching 22GBs of usage for that month, this device could be shifted to an unlimited plan where backdating will extract all 22GBs from the pool and count only towards the unlimited usage with no overage.

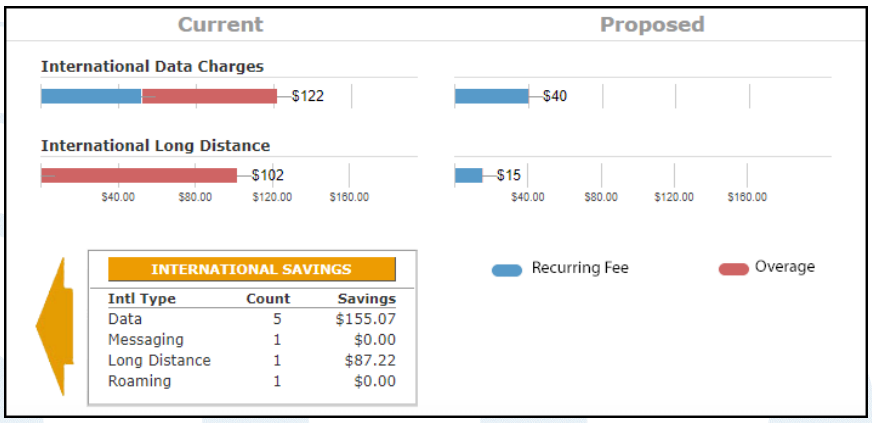
The challenge: Particularly with pool groups, constant shifting may be required to keep pools on track to use just enough of the data and not incur overages. Managing the collection of the unbilled usage information from carrier portals can be challenging in the absence of algorithms and visual tools such as seen below with MobilSentry™.



4. Controlling international costs

Two types of international plans exist, ones that incur a daily fee of $10 if any international usage occurs ("Day Pass" or "Travel Pass") and another where you purchase a given quantity of data for the month ("Passport" or "International Plans"). Pay per use plans are the best place to begin if international travel is uncertain or not intended for extended periods. For example, if a device uses only three days of international usage and doesn't spike the domestic data pool, then the cost of international usage is a rather affordable, $30 for the month. However, if a user consumes 30 days of international usage, even if done in small quantities, the cost for the month will be $300. In this case, purchasing 0.5GBs for $70 is more cost-effective. One additional component to be aware of is that daily plans have a less extensive list of supported international countries.

The Challenge: While the best practice is to have a means for employees to alert telecom admins ahead of international travel where usage will occur over an extended period, this may not always be possible. Alternatively, it is helpful to have an ability to alert telco admins when international travel has occurred mid-cycle as is provided in MobilSentry™.



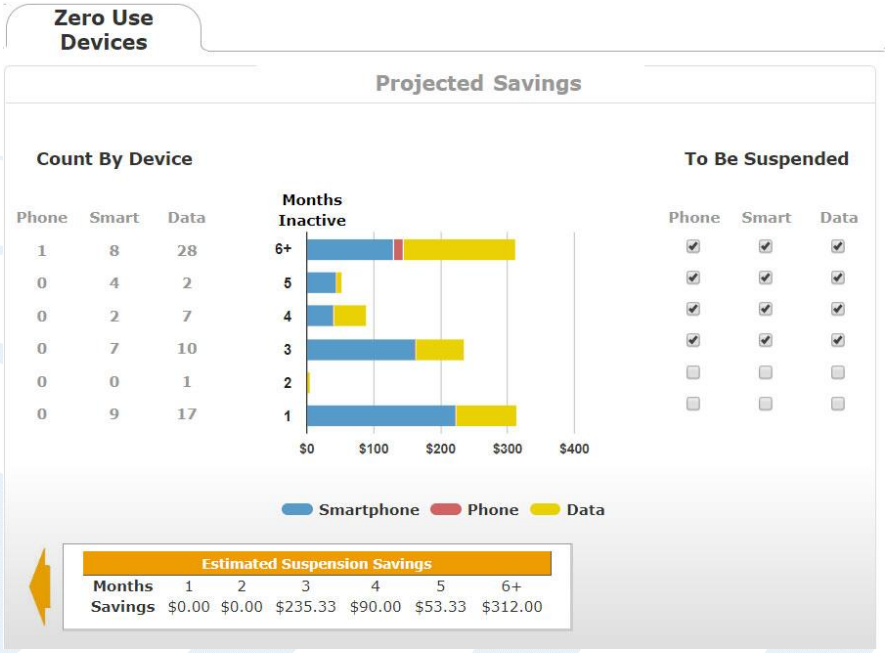
5. Line management's role in terminating unused devices

While unused devices can help by adding data to pools while contributing no usage, it will always be cheaper to add incremental data to a device already generating usage than the cost of a device on its minimum data plan. For example, the typical pool plan for a 2GB smartphone is $65, and the cost of a 4GB plan is $75, only $10 more for the 2GBs. Zero use devices are an ever-present problem in large organizations, often quietly impacting unneeded carrier costs.

While carriers increasingly are providing reports to identify these devices, the challenge is to engage line management in a manner that they can participate in the identification and

actioning of device suspensions or terminations. Placing devices on a no-cost or low cost suspend status can help in reducing expenses. Still, carriers have a practice of rolling them back to active status after a predefined period. Companies that provide monthly notifications to line managers in departments where zero use devices exist is helpful in proactively addressing the problem. Forgotten devices can bill for months or even years without any knowledge of a manager, which is a sunk cost that can't be recaptured.

The Challenge: Managers are usually inclined to take action that will reduce their telecom expense allocations, but they are typically not able to discern which of the devices being charged to their cost centers are inactive. MobilSentry™ provides a range of alerting options for line management, including a browser-based dashboard with monthly alerts quantifying the count and numbers of zero-use devices in their department as well as email notifications to spur action on these devices.

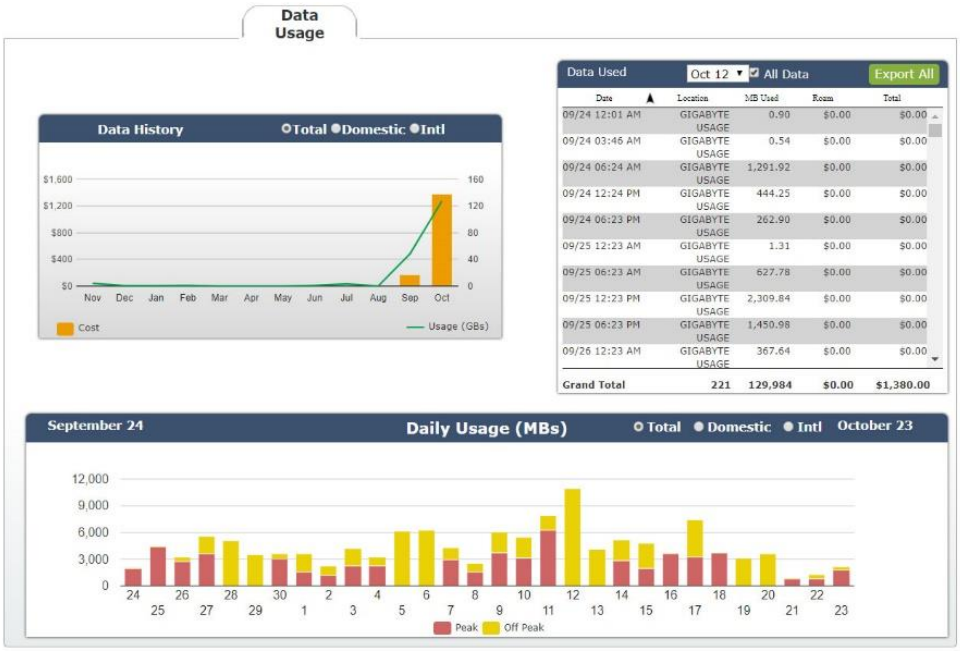


6. Understanding data usage in depth

While there are options to reduce carrier invoices through the countermeasures described above, these actions can only do so much in holding back the tide of growing data usage. Understanding who these frequent offenders are represents an essential step towards enlisting the support of employees and management in reducing unnecessary non-business use. Intuitive analytics can go a long way towards highlighting root causes and identifying needs for policy and enforcement changes. Carrier invoices provide transaction histories that include times and quantities used in prior billing cycles. This information can be

revealing when captured with graphical dashboards and analytics. As well, knowing where top users stand in real-time on unbilled data can be helpful in proactively addressing non-sanctioned mobile device usage before it becomes a costly problem on the upcoming invoice.

The Challenge: Carrier invoices provide an increasing level of detail on data usage. Unfortunately, it is presented in an unwieldy form absent of analytics. In addition to real-time reporting on mid-cycle data consumption, MobilSentry™ provides a wealth of intuitive graphical dashboards to gain actionable insights on employee usage, as indicated below.

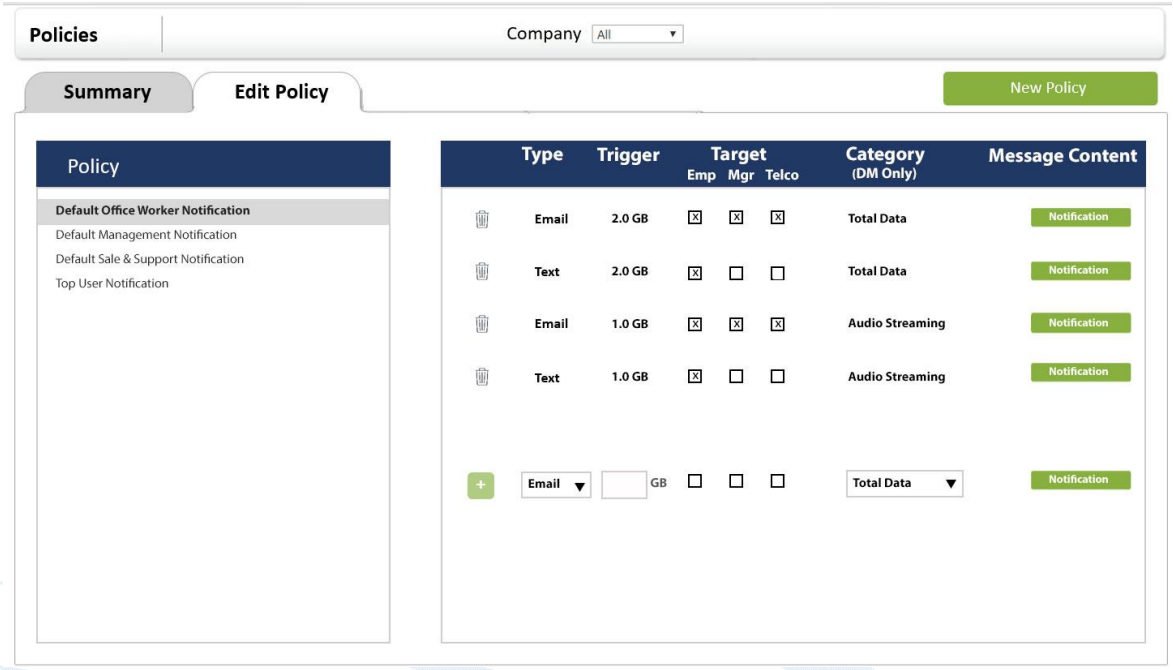


7. Real-time awareness of usage outside company policy

Telecom administrators are usually quick to spot top users, but this can be a revolving door of high-end data users. While some users may be consciously aware of their excessive usage patterns, others may be relatively oblivious to the amount of data they are using each month. Most employees will respond conscientiously when aware their usage is creating an unneeded expense for the company. Other users will only respond to the threat of management, becoming aware of their high data usage. Learning when an invoice appears that there is a new set of high use problems is helpful; still, notifications that come in real-time before the cycle closes can alter the trajectory of employee usage before it leaves a mark on the upcoming invoice.

The Challenge: This is a two-part challenge, first is knowing in real-time or mid-cycle where usage is on any employee. Second is establishing usage policy boundaries that can be used

to trigger an automated alert to an employee as well as a telecom administrator where usage exceeds a company-established usage ceiling. MobilSentry™ includes the ability to define policies for groups or job titles that can trigger a notification when an employee in that defined group exceeds their predetermined limit.



Conclusion

Companies today can only be successful in controling rising invoice costs when they attack the problem on multiple fronts with the assistance of time-tested algorithms and proactive notification methods.

For additional information about MobilSentry™, our fully automated mobility management solution, please visit www.mobilsense.com, email info@mobilsense.com or call 888-870-4250.