

Confining the Mobile Data Use Surge

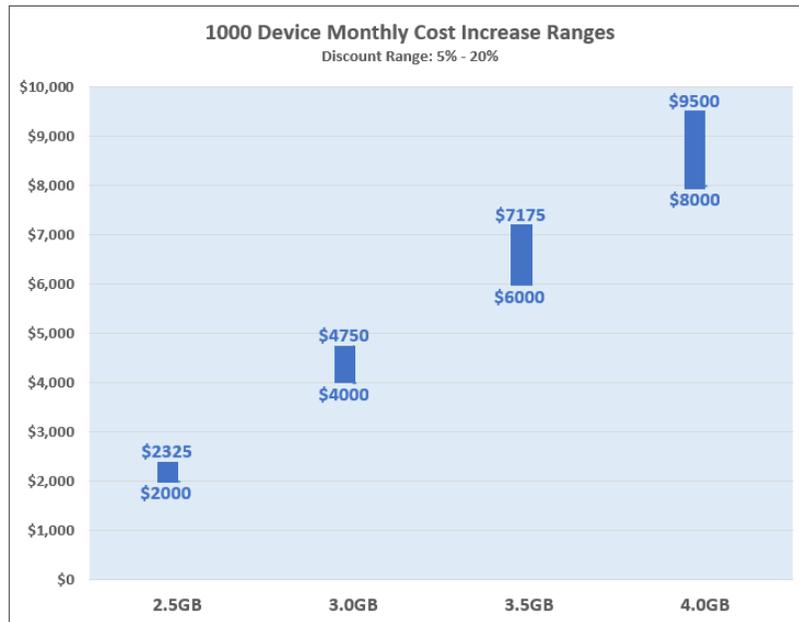
The sustained practice of employees working from home has continued to fuel growth in mobile data usage. It is rare to find companies that have not experienced a rise in data usage. Most are feeling pressure from the unanticipated data cost increases due to the current economic environment. Many industry leaders hypothesize that companies are likely to adopt more work-at-home options to accommodate increased employee flexibility; hence the data problem will not be short-lived.

The Cost of Increased Monthly Data Usage

Most carrier data pricing models run about \$5 (less contract discount) per additional GB consumed in a cycle. For users not on unlimited plans, this means a linear cost increase for every additional GB consumed. Assuming a projected increase of 0.5GB/device average per user on 1,000 pooled devices and a 5% client discount, this translates into \$2,325/month above current billing rates. Suppose the overall average increase is 1.0GB/device. In that case, the cost becomes \$4,750/month. This simple example should provide a wake-up call for telecom organizations tasked with the care and management of company mobility solutions. The best cost/device on most carrier pools occurs when the average usage hovers between 2.0 and 3.0 GB/month.

Exclusively using unlimited plans may remove the need to worry about overages and how data is used. Still, it is like insuring for a loss by purchasing more coverage to be extra safe. This approach ensures paying for comfort that will never be required. Using only unlimited plans will always cost more than effectively using pool plans combined with unlimited plans for the highest users.

The chart below shows the actual cost increases from company averages ranging from 2.5GB to 4.0GB. The spread accounts for contract discount ranges between 5% and 20%.



What Drives Home Office Data Increases

In the absence of Internet service for home offices, companies have either supplied those employees with hot-spot capabilities or authorized the use of existing smartphone personal hot-spot access. While these scenarios will increase data usage, it can be viewed as a legitimate cost-of-business increase associated with work-at-home accommodations.

The real problem lies not in legitimate bandwidth usage increase from home but the associated personal usage that has produced significant growth in these unusual times. While watching newscasts or streaming other videos at work on the company intranet does not increase company costs, it does increase mobile cost either at work or home when that activity occurs on a carrier network from a smartphone, personal hot-spot, or MiFi.

Impact of the Digital Lifestyle on Data Usage

The combination of handset features, application capabilities, video content richness, and network speed has transformed the smartphone into the remote control of our lives. As evidence, fewer people read newspapers, listen to voicemail messages, deposit at banks, send faxes, buy movie tickets at theaters, or carry cameras. Smartphones allow control of house climate, operation of televisions, and responding to a doorbell ring from anywhere.

Smartphones have made our lives more productive, especially in the business world. Mobile productivity apps have changed how we plan, execute, and interact with our peers and associates. Content can be exchanged rapidly, shared, and accessed from anywhere.



One of the most impactful changes has been the way media outlets deliver information and news. The TV has trained us to look for information via video content, and with the evolution of video streaming, much of what we consume digitally now includes video clips. For example, almost every news article has a video clip before the written content. YouTube has become a conventional means to share video content for marketing, personal exchanges, and entertainment.

The impact of this seismic shift in data consumption is validated by current research and studies. Currently, audio and video streaming account for more than 60% of all data traffic. As the digital lifestyle continues to increase data consumption, there is an impending collision course with this behavior and the cost of data for company-provided mobile devices.

Where it All Begins – Gathering Data to Assess the Problem

To identify the breadth and depth of any problem, gathering accurate and timely data is vital. Unfortunately, merely looking at quantities of data reported on carrier invoices for high usage individuals does not answer the most fundamental question – was this data usage necessary for business purposes? High usage reports raise suspicions, but employees might not even be aware their usage patterns produce such high usage when confronted on high usage topics. For those that are savvy enough, they are not likely to admit to excessive personal use.

The only way to understand if usage is appropriate is to have details documenting which sites were visited and how much data they consumed. Anything short of empirical usage data becomes a lengthy and challenging discovery process in which employees may have incentives to be less than candid about their actual behaviors.

Essential Visibility Beyond Standard Reporting

A new segment of data analysis tools has emerged over the past five years, producing detailed usage statistics on mobile devices. We refer to this segment as Mobile Data Management (MoDM). There are only a small set of players in this arena. Some utilize an app that runs on the device, but this approach only supports smartphones and tablets. In contrast, others use technology that runs inside the carrier network, supporting any mobility device, including MiFi's and routers. The MobilSense Data Management solution runs inside the carrier network, and it requires no software installation. Once onboarded through a simple configuration change, data is collected and categorized in real-time and presented in a powerful display showing both an aggregated company-wide level as well as just for an individual user.

Data usage at the aggregate level can be instrumental in formulating company usage policies. Understanding category usage by time of day, such as streaming video and social media usage, can be illuminating and even surprising. Once policy parameters of appropriate business versus personal usage are defined, policy enforcement using MoDM becomes useful and timely. It is



easy to focus on those who consistently violate usage policy. These users are the ones who will benefit from enforced controls and additional education. Regarding privacy concerns, for those companies who cringe at the notion of having insight into its employees' data usage habits, MobilSentry™ can be programmed to set limits on content deemed entertainment without infringing on an employee's privacy.

Changing Mobile Usage Behavioral Patterns

We believe most employees have a sense of corporate responsibility and duty. Many companies find it challenging to keep employees informed of their monthly mobile carrier usage and cost information. Yet, without this, users are unaware of the effect their behavior has on company expenses. MobilSense makes this task easy by providing summary email notifications simultaneously to employees and management. One helpful process to further educate users includes providing browser login access to employees and managers to navigate through usage patterns and recent history of total data usage by month. Experience has shown that heavy data usage is substantially reduced through employee education, leading to increased home and office WiFi usage where WiFi is available.

Some employees may also look for gray areas as justification for usage they sense may fall outside mobile use policies' boundaries. For example, some feel justified in tapping into a company-provided hot-spot for home usage to save on subscribing to home internet services. Others may feel justified in streaming video or audio while on the job if they think such diversions do not impact their job performance. For these employees, a strong motivation for more prudent usage can come from the understanding that direct line management pays attention to monthly reports on top, personal data users in their departments.

Proactive Notifications Yield Results

Today's most significant impediment to controlling data usage is that users rarely think that their usage exceeds policy limits and does not have an opportunity to adjust in the middle of a billing cycle. Today, most corrective actions are applied after-the-fact when a billing cycle ends, and a Telco department reviews top user reports for the prior month's invoice. At that point, the costs of over usage cannot be reclaimed. It is essential to empower employees with information that delivers more prudent mobile usage behavior when excessive use occurs.

MobilSense can generate a mid-cycle email or text notifications to any defined threshold established for a given group of employees with real-time data collection. These notifications can also include escalation alerts if an employee ignores earlier cautionary messages while exceeding established company guidelines. For example, suppose a company determines a specific set of employees in a defined job role should not be using more than 3GBs of data per month. In that case, we recommend a series of notification escalations: First, a reminder at 2GBs that they are 2/3rds the way to their data limit. Second, an alert that they have surpassed

their 3GB threshold and should limit further carrier data usage by utilizing WiFi. Third, an additional alert at 3.5GBs, indicating escalation to management.

Selectively Apply Data Limitations

Limiting data usage for specific personal entertainment categories or capping overall data usage is an essential final step for users who ignore company guidelines and alerts. Policies can be defined from the outset of each month or triggered dynamically by escalating usage during the billing cycle. With access to the granular category usage and overall data usage, MoDM technology can block carrier data access on a device at the domain level or can enforce quota limits on all carrier data usage for a device. Policy compliance enforcement is achieved in an unattended fashion through automation. To reduce employee entertainment usage at individual and group levels, start by blocking access to entertainment sites, thereby forcing employees to utilize WiFi capabilities at home and work. The result of this three-step process, "Learn, Inform, and Limit," equates to consistent predictability in company data usage.

The screenshot shows a web interface for managing data policies. It features a 'Summary' tab and an 'Edit Policy' tab. The 'Edit Policy' tab contains a table with columns for Threshold, Target (Emp, Mgr, Telco), Category, and Alert Type. The table lists several policies with their respective thresholds and target settings. A 'New Policy' button is visible in the top right corner.

Policy	Threshold	Target			Category	Alert Type
		Emp	Mgr	Telco		
Default Office Worker Notification	2.0 GB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Total Data	Notification
Default Management Notification	2.0 GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Total Data	Notification
Default Sale & Support Notification	1.0 GB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Audio Streaming	Notification
Top User Notification	1.0 GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Audio Streaming	Quota
+ [] GB		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Total Data	Quota

Integrating MoDM with Mobile Expense Management (MEM)

The purpose of a Mobile Data Management (MoDM) solution is cost containment. A standalone MoDM solution may not be able to align usage by invoice cycles accurately. It will not have rate plan billing metrics to quantify specific cost savings linked to actual data reductions. What is required for a holistic approach to taming out-of-control entertainment usage is a combination of traditional Mobile Expense Management along with emerging MoDM capabilities. Only MobilSense combines these capabilities in a single integrated solution.

	TEM	MoDM	
Report Quantity and Time of Usage	✓		✓
Top User Reporting by Bill Period	✓		✓
Data Usage Trending & Analytics	✓		✓
Correlate Invoice Cost with Data Usage	✓		✓
Adjust Data Pools in Real Time	✓		✓
Report Unbilled Data in Real Time	✓		✓
Define Data Policy Thresholds Actions		✓	✓
Generate Real Time Alerts		✓	✓
Limit Data Usage by Thresholds		✓	✓
Unbilled Real Time Top User Reporting		✓	✓
Report Usage by website/application		✓	✓
Restrict Usage by Category		✓	✓
Cap Overall Data Usage by Policy		✓	✓
Sync Unbilled Data with Invoice Period			✓
Quantify Cost Savings by Device			✓

Conclusion

Companies can only be successful in controlling rising data costs when they take advantage of the latest MoDM technologies. These proven solutions can help with the current work-at-home data surge and over the long term as the digital lifestyle continues to cause data usage to rise.

For more information on how you can confine the mobile data usage surge, [click here](#)