Five years ago, there were hundreds of companies that described themselves as telecom expense management (TEM) providers. The majority of these were providing telecommunication services contract negotiation and management on behalf of companies with multi-carrier wireline voice and data services relationships. These services were often delivered as part of a business process outsourcing engagement, although many TEM vendors also provided software (licensed to run on enterprise customers' servers) that provided reporting on voice and data service plans, electronic billing records, invoice reconciliation, and plan optimization. Over the last several years, a number of significant changes have occurred in this fragmented ecosystem, which has consisted primarily of small, specialized, domestically focused companies.

Wireless services spending for enterprise communications (voice, e-mail, messaging) and access to line-of-business applications has become increasingly important for companies to manage, and wireline-focused TEM providers have nearly all added wireless plans and mobile devices to their platforms. New wireless-oriented entrants have sprung up to focus specifically on this market. The value proposition has evolved from “billing management” to one of “lifecycle management,” and delivery models for TEM have evolved to hosted and SaaS services offered by TEM vendors or third parties. MNCs have begun to try to understand their wireless spend on a global basis, requiring vendors to handle a growing array of international wireless service plans. TEM is combining with other aspects of mobility management, such as logistics for procurement and approvals, mobile device management (MDM), and mobile application enablement and management, and these capabilities are being offered as managed services by global operators and IT service providers. Last but not least, consolidation through acquisition has dramatically changed TEM market dynamics.

As the market requirements have evolved, so has the ecosystem of TEM vendors changed to adapt to the needs of today’s business customers. Changes have occurred in the makeup (i.e., the who’s who) of the vendor landscape (due especially to acquisitions), the delivery model, the kinds of tools offered, the globalization requirements of the customer base, and in the channel partnership structure. This evolution is described in this reportend.

As wireless communication has become increasingly important to enterprises over the last five years, TEM has been re-energized by the requirement to understand and manage wireless spending. The fact that most large enterprises and MNCs have multiple relationships with carriers to handle communications has always been a driver of TEM growth. In the wireless world, the complexity of multiple carrier relationships (especially for MNCs) added to the ad hoc way in which enterprises tend to acquire mobile connectivity
(e.g., by department, region, or personal preference), and the fact that wireless spend has historically not been planned for or managed is significantly upping the ante. Businesses need help in both getting a handle on what service plans and mobile devices are already in use by their employees as well as planning the future based on services optimization; they also are combining insight on how much they spend with other ways to corral mobile usage, including centralized mobile device and application management.

Who Are the Primary TEM Providers?

Over the last five years, there has been further consolidation in a market that had already seen a large number of acquisitions. The most prominent example of this is Tangoe, a provider of fixed and mobile usage, asset, and expense management solutions, which is approximately three times larger than any of its direct competitors (with $67 million in revenue in 2010). Tangoe has made five acquisitions since 2007, including: Traq Wireless (providing Tangoe with TEM mobility capabilities), Information Strategies Group (a provider of accounting and billing chargeback software), HCL (which provided Tangoe with a number of large customers and had itself acquired competitor Control Point), the TEM business of Telwares (bringing both trained TEM employees and customers), and InterNoded (a provider of multiplatform MDM software). Between these five companies, Tangoe has grown its business and increased its employee base (which now numbers about 750), assets, and facilities, becoming a more credible, attractive option for large business customers. It also acquired expertise in new markets (such as MDM) as well as a large and increasingly global customer base. Tangoe has also had an IPO filing in the works for over a year, and it has recently re-filed in the hope of going public in 2011.

Global wireless operator Vodafone has also made recent high-profile TEM acquisitions. The Vodafone Global Enterprise business unit, which courts MNCs, acquired TnT Expense Management and Quickcomm in 2010. It focuses on playing a significant role in providing global companies with a set of managed services (for global sourcing; order and provisioning management; and inventory, invoice dispute, and usage management) via its Vodafone Telecoms Management solution, part of a suite of lifecycle management solutions for fixed and mobile telecommunications.

TEM provider Rivermine was acquired in 2011 by Emptoris, a provider of supply and contract management solutions, providing it with new customers, technology and partners. However, other independent, privately held players in the TEM platform and services space remain, though they tend to be small companies (potentially ripe for acquisition themselves). Notable independents include: ProfitLine; Symphony, Xigo, Asentinel, Ezwim, and MDSL. Most of the TEM providers that were around in the 80s began with wireline and then added wireless TEM (sometimes called WEM) later on, but a few specialized in wireless from the beginning. These include Traq Wireless (acquired by Tangoe), as well as Integrated Mobile and Movero, which merged in 2010 and were not TEM vendors per se, but offer wireless lifecycle management services that include a bill management function. In addition, a few smaller companies have sprung up in the last several years to capitalize on the growth of mobility: Mobi, Mind Wireless, Wireless Analytics, and Wireless Watchdogs.

Continued
## Table 1. Major Independent TEM Providers

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Product Overview</th>
<th>Metrics</th>
<th>Channel Partners</th>
<th>Differentiators</th>
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</thead>
</table>
| **Tangoe**            | Fixed and mobile TEM as part of communications lifecycle management suite that includes asset, expense, and usage management | Founded in 2000. HQ Orange, CT and Amsterdam  
$13.5 billion spend managed ($2.3 billion international)  
375,000 invoices processed per month; 575 customers;  
1,700 carriers supported in 200 countries  
Approx. $67 million in 2010 revenues | IBM  
Dell Services  
Accenture | TEM part of larger Lifecycle Management suite (plan/asset sourcing through retirement) which also includes MDM and consulting  
SaaS platform |
| **Vodafone Global Enterprise** | Vodafone Telecoms Management has modular structure with ordering, audit, spend control, device control, asset management, and contract management across fixed and mobile nets | HQ Newbury, Berkshire, UK  
No specific metrics available for VTM 600 clients supported by Vodafone Global Enterprise including large mobility outsourcing contacts with Oracle, Novartis, DHL, and Akzo Nobel | VTM sold directly to large MNCs | Incorporates acquired Quickcomm and TnT platform elements, technical and services capabilities  
VGE will re-organize TEM resources into dedicated practice with a set of new professional services. |
| **Emptoris**          | TEM for wireless and landline spend coupled with sourcing and contract management Platform includes telecom spend and lifecycle management including ordering, inventory, invoice processing and auditing, as well as wireless expense management, mobile device management, reporting, and analytics | HQ Burlington MA  
Founded 1999  
300+ global Fortune 1000 customers  
650+ global employees (60% located outside of N. America)  
Projected annual growth of 20%. Approximately $85 million in 2010 revenues  
Rivermine customers include Chubb Insurance, Ford Motor Company, Fannie Mae, IKON Office Solutions, and Sodexo. | Accenture  
IBM  
Alti  
Alliance Life Sciences  
EMC  
Huron Consulting  
Shanghai M-Way  
Protiviti | January 2011 acquisition of Rivermine (which had already acquired BBR Wireless Management in 2007 and MBG Expense Management in 2009) provided Emptoris with end-to-end TEM solution.  
Emptoris was already strong in global professional services and channels. |
| **Xigo (formerly Invoice Insight)** | Hosted service platform manages carrier data, tracks inventory, and provides fixed and mobile life cycle management. Three tiers: Xigo Now (free for life, wireless-only); Xigo Pro (expanded functionality for monthly per-seat subscription charge); and Xigo Enterprise (combining fixed and mobile TEM for global customers) | Founded in 2000. HQ Manassas, VA  
Targets global 2000 enterprises; mid-market enterprises; SMBs; federal, state, and local government; and expense management consulting firms | Carousel Industries  
Dimension Data | Offers multiple service tiers including free base-line self-service TEM portal. Xigo claims that the features and functionality of the free service meet the majority of client needs. Paid versions priced per user, per month for unlimited number of devices and independent of wireless spend. |
| **MDSL**              | Uses algorithms to extract, cleanse, and classify the mass of data contained in invoices, purchase orders, and contracts with the goal of automating spending analysis, auditing, and eradicating overcharges; also provides supplier negotiation and contract management, procurement, and payments | HQ London and New York  
Founded in 1995  
150 customers in 34 countries  
Claims that its TEM solution can start delivering 200-300% ROI within 30 days | Accenture  
Orange Business Services | Strong in Europe (HQ in London and New York plus offices in Tokyo, Macau and Singapore)  
Has base of financial services customers for specialized market data expense management service  
Includes IP telephony off-net cost management |
Table 1. Major Independent TEM Providers (Continued)

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</thead>
<tbody>
<tr>
<td>Asentinel</td>
<td>Offered as self-managed, managed service, or outsourcing solution, via a customer-hosted or SaaS deployment</td>
<td>HQ Memphis, Tennessee with offices in Amsterdam and Bucharest, Romania</td>
<td>U.S.: C3USA, Allbridge, Intersel, nSync, Vatic, SourceOne, AvidXchange, Integrity, Spectrum, Infoplus EMEA/APAC: Commsouth, Spice Consulting, Temteam, Tobe inControl, Telcom. dk, Vitek, Utelcom, Wey</td>
<td>Only TEM vendor with patents; has sued other TEM vendors for patent infringement Large worldwide partner network with regional VARs/SIs</td>
</tr>
<tr>
<td>ProfitLine</td>
<td>TLM Savings Suite provides fixed and wireless telecom expense, ordering, and provisioning; offers MDM (through BoxTone); contract negotiation, user support, and professional services</td>
<td>Founded 1992. HQ San Diego; expanded to UK and Germany in 2009 Added MDM in 2010</td>
<td>BT Global Services, Booz Allen Hamilton, BoxTone, HP</td>
<td>Known for highly structured methodologies Is engine behind BT Managed Mobility Expenses service</td>
</tr>
<tr>
<td>Symphony Software Management Solutions (SMS)</td>
<td>Offers TEM (described as “communications lifecycle management”) via licensed software or as managed service (subscription-based cloud service)</td>
<td>Founded in 2002 HQ Dallas, TX</td>
<td>Sybase division of SAP</td>
<td>Not really a TEM software platform provider, but more of a full-service IT SP with managed services for TEM and MDM</td>
</tr>
<tr>
<td>Parent is Symphony Services</td>
<td>Also offers process outsourcing services for audit, optimization, procurement, and contract management Also offers MDM, IT service management, product line management, and Web access management</td>
<td>Over 350,000 mobile devices under management Over 100 telecom service providers connected to SMS network Over $4 billion in mobile spend under management 75% of customers are MNCs</td>
<td>AT&amp;T, HP, CSC, BMC Software</td>
<td>Parent is a software outsourcing company.</td>
</tr>
<tr>
<td>Ezwim</td>
<td>Self service tools via multi-tenant SaaS platform accessed via a portal; also offers white label solution for operator managed services Includes TEM and service management (logistics); SLA reporting</td>
<td>Privately held Founded in 2001 HQ in Amsterdam</td>
<td>Corpotel, TAG, Value Sourcing Solutions, Fruit Mobile Managed Solutions, Connected World, Trends ICT Group, Micpoint, MBC, Kolk and Dijk, Overhoff, PHC, VTM Telecom, Reitsma Telecom, Helmink Telecommunications &amp; ICT, DB Telecom, BTC Teleconsult, Mobiie Zaken, Viritel</td>
<td>Strong in Europe Narrower scope than most competitors as it does not do procurement, dispute resolution, help desk, or payments on behalf of customers Sells direct but has a focus on indirect channels which offer its SaaS solutions</td>
</tr>
</tbody>
</table>

**Evolution of Business Models**

Nearly all TEM vendors have changed the way they describe their services from “billing/invoice management” or even from “TEM” to “lifecycle management.” Rather than offering software that runs on an enterprise server or outsourcing services that manually or electronically aggregate and display carrier services bills and reconcile them against service contracts to note billing errors (often in conjunction with sourcing, contract management, and multicarrier service optimization), most providers now take a more holistic approach. They are adding logistics (automated workflow for procurement and approvals from a catalogue of approved enterprise plans and devices). Many have also added MDM (Tangoe and ProfitLine, for example, have done this through acquisition
and partnership respectively). Most offer end-user and IT help desks. In addition, the majority of vendors now offer externally hosted or SaaS services with a recurring per user, per month pricing model rather than the old software licensing or time-and-materials BPO project fee model. End-user and IT Web portals are also standard, often with self-service options for procurement, approvals, and report formats. Vendors are also adding professional services to help customers with benchmarking, advise on RFPs and procurement, handle negotiations with carriers, and even advise the enterprise customer on overall mobile strategy.

**Channel Evolution**

Large IT SPs such as IBM, HP, CSC, and Accenture and global operators with enterprise/MNC business units such as AT&T, Verizon, Vodafone Global Enterprise, Telefonica, Orange Business Services, BT Global Services, and Deutsche Telekom/T-Systems have recognized the importance of providing a managed TEM and logistics service as part of managed mobility suites that include MDM/security and managed enterprise applications (MEAP). The IT SPs still tend to provide this as part of large outsourcing deals, but they have begun to offer TEM and MDM as standardized managed services as well. Other SIs such as Dell Services, Fujitsu, and KPN/Getronics are also adding managed mobility to their managed workspace offerings. These managed services offers have provided opportunities for the TEM platform vendors. For example, IBM uses Tangoe, BT uses ProfitLine, Verizon uses Quickcomm (now owned by Vodafone), Orange uses MDSL, and Deutsche Telekom uses Ezwim for TEM as well as Datnet for contract management. A number of TEM vendors also resell or partner with a number of regional SIs/VARs. For example, both Ezwim and Asentinel have many partners that offer their TEM services as part of their own packages.

**Near-Term Drivers**

- Further consolidation is inevitable, as the market is still fragmented and large companies may worry about putting their trust in a small TEM provider which may not exist in two years. Logical futures include acquisitions of TEM providers by operators and SIs.

- The growth of enterprise mobility and the excitement about generating incremental revenues by offering managed mobility services is already a huge channel opportunity for the independent TEM platform providers. Short of acquisition, small and mid-size SIs and VARs are already good partners; getting buy-in from large SIs and global operators is more difficult. For this reason, TEM vendors will be increasingly partnering with MDM and MEAP providers as well as their counterparts in other regions to provide scale, as well as integration and diversity of solution elements.

- Operator-led managed services for TEM are already available from most Tier 1 global operators. Large SIs still primarily offer TEM as part of large outsourcing deals, but mid-size integrators are adding standardized, managed, mobile-focused TEM and MDM services to enhance their current wireline and IT-focused initiatives. There will be more standardized managed services from the IT SPs as a natural follow-on to desktop/workspace management initiatives, targeting a wider swath of customer segments including SMBs.

- The entry point to managed mobility has often been TEM, as customers first seek to understand their current inventory of mobile devices and plans and then go on to try a centralized management and security solution. In the future, there will be more customers starting with MDM as they add tablets and other iPhone and Android devices that are not considered inherently secure. In addition, many MNCs are looking first to mobilize existing applications and then to transform processes with mobility; MEAP may be their logical entry point. TEM, MDM, and MEAP providers need to keep this evolution in mind as they develop and market solutions.
Competitor Response & Recommendations

- When talking to an independent TEM vendor or SI about competing against operators for TEM engagements, the “fox guarding the henhouse” argument is always brought up. Operators are still mistrusted by some potential customers when it comes to analyzing and optimizing TEM spend. Operators need to come up with better ways to ensure customers that they will be objective. Aside from optimization, a single carrier having detailed electronic CDRs and contract information about its competitors also gives rise to skepticism. Separate subsidiaries, spinoffs, or even using a third-party for optimization are ways to provide separation.

- There still need to be more partnerships among TEM/MDM/MEAP providers to provide a complete solution and avoid the small company fragmentation issue. In addition, resellers which are putting together a managed mobility suite with different partners’ solutions need to provide integration of these platforms at least from a UI perspective, so all services can be accessed from the same portal. In a perfect world, real integration of these platforms (where, for example, they all share a common database) will be useful for value-added capabilities such as real-time service monitoring.

- Differentiation is still key; many TEM vendors describe themselves in identical ways. Nearly all are using “lifecycle management” in their marketing materials. Most describe their offerings as services rather than software, providing externally hosted or SaaS/cloud-based solutions. It is incumbent on the TEM providers to stand out rather than all follow the same road. There need to be granular capabilities comparisons, case studies with savings illustrations, or other means to tell customers why they are unique.

Buyer Actions

- Wireless telecom spending is not generally centralized; enterprises often contract with in-country or regional (e.g., North American or Pan-European) operators separately to get the best deals, and budgets for offices in different countries may be managed independently. However, TEM platforms are particularly useful in understanding and optimizing total spend. TEM vendors are adding European and Asia-Pac offices and the independents are striving to be able to provide a global perspective.

- Enterprises that attempt to do spend analysis and optimization themselves, or even with the help of internally managed software solutions, often fail; the use of third-party fully managed TEM solutions is warranted, especially for MNCs with multiple carrier relationships.

- Operators are logical TEM partners, as they are experts in telecom services, offer TEM in conjunction with related mobility services, and may be looked to as a central source for global contract management. The “fox guarding the henhouse” argument is largely a marketing message used by their competitors. If they were not being objective in their optimization recommendations, it would be evident and they would quickly lose customers.