

Mobile stock trading takes flight in the Middle East

The Kuwait and Middle East Financial Investment Company (KMEFIC), which pioneered electronic trading in Kuwait with the launch of Alawsat.com, has once again broken new ground with the introduction of a mobile stock trading solution that enables its customers to trade in up to seven markets in real-time, whilst they are on the move.

The solution, Alawsat Mobile for Java-enabled mobile phones, was developed by hSenid and completes KMEFIC's comprehensive trading product suite. It was also the first mission-critical application to be launched by KMEFIC on an open source platform, resulting in considerable cost savings for the company.

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KMEFIC is a leading asset management and financial services company established in 1984 and listed on the Kuwait Stock Exchange in July 1997. It is a licensed brokerage for several capital markets in the Middle East including the Kuwait Stock Exchange, Dubai Financial Market (DFM), Abu Dhabi Securities Market (ADSM) and Saudi Financial Market (TADAWUL).

In 2002, KMEFIC launched Alawsat.com, the first electronic real-time trading system to be based in Kuwait. There are currently about 20,000 registered users on Alawsat.com giving KMEFIC the biggest online customer base amongst brokerage firms in the country.

A PC based investment application Alawsat Pro followed, offering traders more powerful functionality and decision making tools. It had a PDA/smart phone version which ran on the Windows CE operating system.

By then, KMEFIC was already making its mark as a technology savvy brokerage house. Customers could trade in multiple markets using a single application.

Solution deployed

mStockTrading—an application that enables stock brokers to allow their clients to conduct straight-through trading of stocks on a stock exchange. Mobile users with Java enabled handsets can perform stock trading transactions based on a vast array of real-time information which is delivered via the mobile operators' GPRS (general packet radio service) network.

hSenid's value proposition

- Proven solution in mStockTrading, with a successful deployment track record in Sri Lanka.
- Ability to customise the solution quickly enables KMEFIC to reduce time-to-market with new service.
- Success in addressing security concerns of brokerage industry helps increase customer confidence.
- Expertise in mobile technologies ensures that applications are user friendly, thus driving customer adoption.
- High quality software reduces deployment time and enhances user acceptance.
- Open source expertise helps KMEFIC to reduce overall project costs.
- Strong local partner to deliver implementation services and first level support.

Any trader registered with KMEFIC could place his order directly by using the web based Alawsat.com online trading system, or using the PC or PDA based Alawsat Pro Application.

But KMEFIC wanted to take this one step further, with plans to make stock trading as ubiquitous as the ordinary mobile phone. It had observed that many traders (at least those who had PDAs and high-end smart phones) were quick to adopt the Alawsat Pro PDA application because they could use it anytime and anywhere. But there were many others who were using normal mobile phones. What it wanted, then, was a mobile stock trading application which could run on the majority of mobile handsets, which were Java enabled.

A mobile stock trading solution would enable KMEFIC to grow its customer base whilst reducing operating costs. For example, many traders still called the dealing room to ask the staff to place orders on their behalf. The mobile trading solution would eliminate these manual processes and offer total privacy for traders to place their orders in an efficient and quick manner.

However, to deliver these benefits, the mobile stock trading solution had to first address the unique needs of the Middle Eastern market and the stringent requirements of the brokerage industry. Chief amongst these was security, which was one of the main concerns of KMEFIC.

"Since stock trading is a mission critical financial application, we need the mobile stock trading to be secured 100 per cent, end-to-end. User authentication has to be done from the existing back office server and users should be able to use their existing online trading user ID, password and trading PIN to access the mobile application as well," said Addul Moshin Al Qarooni, General Manager for IT and On-line Trading at KMEFIC.

Since time was a critical factor in trading, the mobile application also had to be able to give customers real-time stock quotes via a scrolling ticker, and enable them to place their orders almost immediately. Trading on new stock markets that were being introduced by KMEFIC also had to be enabled dynamically for the mobile application.

Customers had to be able to use the same application to trade in any of these markets using Arabic or English, regardless of the phone's default language setting.

Due to the sensitive nature of an individual's stock trades, an additional requirement was that all transaction information or trace logs had to be removed from the mobile



phone so that there would be no impact on security or privacy should it be lost.

Besides these stringent business and security requirements, there were also many technical challenges involved in implementing the mobile stock trading solution. KMEFIC wanted to cover about 90 per cent of the different mobile phone brands in Kuwait. This meant having to develop separate J2ME client applications for each mobile phone brand.

The size of the J2ME client application had to be restricted to enable "Over the Air" installation which would allow existing Alawsat.com users to install the application within one or two minutes, simply by downloading a web page from the mobile browser.

The service provider also had to overcome the limitations of screen size and processing power in a normal Java enabled mobile phone in order to offer a solution that was easy to use.

For the back-end, KMEFIC made the decision to go with an open source platform for Alawsat Mobile – the first time it was doing so for a mission critical application. Cost, together with the stability of the open source platform, were key factors in this decision.

Rolling out Alawsat Mobile on their traditional hardware and software platform would have meant a high initial implementation cost and a substantial recurrent maintenance fee, said Tarek Elghazaly, Project Manager at KMEFIC.

With these considerations in mind, KMEFIC searched for a company with proven technology and technical skills, a strong record of existing mobile application deployments, and a solution which could address the reliability and security concerns of a brokerage. Due to the mission critical nature of the application, strong local support was also a must.

KMEFIC was introduced to hSenid by a local partner a Kuwait based financial solutions provider operating as a reseller/distributor for hSenid applications in the Middle East and North Africa.

In hSenid's mStockTrading solution, KMEFIC found a proven solution which had already been implemented in Sri Lanka. Based on KMEFIC's requirements, hSenid agreed to customise the solution to support multiple stock markets and to have English and Arabic language capabilities. In addition, 24/7 local support was available through the local partner.

When the project kicked off, two hSenid engineers came to Kuwait to understand the operations at KMEFIC and to conduct a requirements analysis. Once their Software Requirement Specification was approved by the KMEFIC IT staff, customisation work began at hSenid's R&D centre in Sri Lanka.

The hSenid team used a remote connection to KMEFIC's back-end test environment to fine tune the integration of the mobile stock trading application with KMEFIC's back office system. For the final implementation, hSenid got the help of local partner, whose engineers handled the installation, on-site testing and training of KMEFIC staff.

The mobile stock trading application was installed on two HP Proliant ML 470 servers in a cluster setup, with the Red Hat Linux Advanced Server 4 Upgrade 4 as the operating system.

The database selected for Alawsat Mobile was MySQL, while the application server Tomcat 5.5 was deployed on each of the two cluster nodes.

The Linux cluster took care of failover. If one server went down, the other node would take over all the processing and users would not notice the difference.



Within three months, Alawsat Mobile was ready for launch. The English version was rolled out first, and the Arabic version followed a month later.

"Since we launched the application in June 2006, the down time has been zero and we have been really impressed by the product stability," said Tarek. "We also managed to reduce the project cost considerably by using open source."

Looking back on the implementation process, Tarek of KMEFIC noted that communication between hSenid, local partner and his own organisation was vital to its success, especially since an offshore vendor was involved. Conference calls involving all three parties were conducted weekly for three months. Minutes of these virtual meetings were circulated, with clearly specified action items and deadlines.

"The commitment of the hSenid team was outstanding," said Tarek. "The quality of the product was of a high standard and we encountered very few bugs in the internal testing cycle. Even though we faced some delays from the third-party hardware vendor, hSenid delivered the project on target and this made it possible for us to be the leader in rolling out mobile stock trading in the region."

The launch of Alawsat Mobile has enabled KMEFIC to offer a complete trading product suite with its back office system, Alawsat On-line, Alawsat Pro for Windows based PCs, Alawsat Pro for PDAs and Alawsat Mobile for Java enabled mobile phones.

"KMEFIC is the only financial institution to offer such a complete product suite in Kuwait and some traders have switched to us from competitors, because of these unique services," said Qarooni. "The existing customers are also really happy about these services and they don't have a reason to move to another brokerage firm."

While customers were initially a bit reluctant to place orders on the mobile stock trading system, they soon grew to trust it. Features like the live scrolling ticker tape were especially well received – customers could personalise it by registering their own symbol list on the ticker tape.

"Mobile stock trading opened a whole new channel for our traders to reach the brokerage firm in a very secured and convenient way," said Qarooni. "Using Alawsat Mobile, our traders are able to trade in four markets directly while getting real-time stock quotes and other information for seven markets via a simple Java enabled mobile phone. This gave a great advantage to our traders by allowing them to perform anytime anywhere trading in both Arabic and English languages."

With Alawsat Mobile, traders can monitor the stock markets when they are traveling, place their orders or check their portfolio without having to call KMEFIC's customer support staff or dealers. "We have even noticed that we have a significant client base outside Kuwait who trade via Alawsat Mobile," said Tarek.

As for the service itself, Alawsat Mobile looks set to go places. KMEFIC is planning to offer more features such as stock charts, top gainers/losers and market news as part of the mobile stock trading application. And as it starts up its operations in other countries, it will also be introducing the mobile solution in these new markets as well.



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