



M2M: The Market for Machine to Machine (fixed and mobile) applications.

New technologies alone will not be able to unlock this extremely attractive market. Only a reliable, progressive high-performance service, with real M2M added value, will be able to meet the actual requirements of the many potential operators and in this way transfer the expected benefits for their respective applications.

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Introduction

More than 880 million connectable new systems annually in 2010 according to the Focal Point Group.

An "M2M" service requires the homogenization of data and exchange formats.

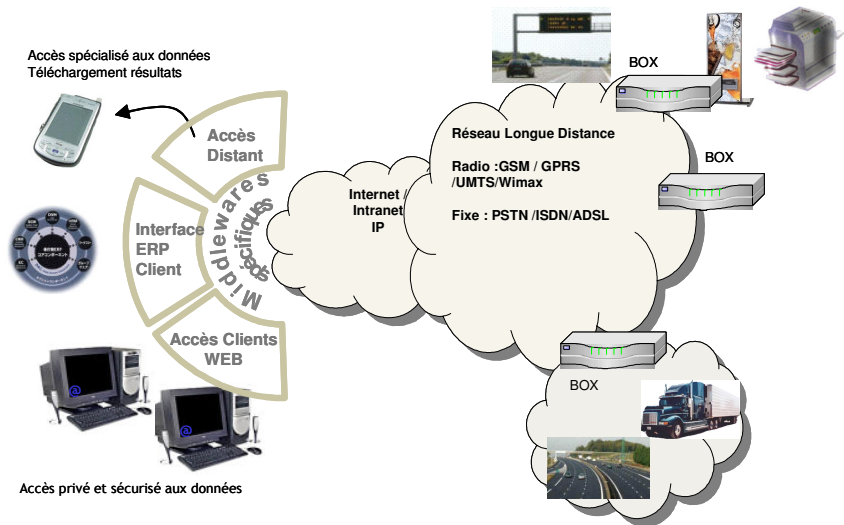
While predicting an explosion in the M2M market, through the growing number of systems, automatons and connectable data captors, the analysts have forgotten to describe the methods of coupling these machines to their application software.

However, even if the physical connection networks (radio and fixed telephony) are more and more high-performance (technology, speed and service quality), the new applications require information exchange with ever greater added value, the computer installations become ever more heterogeneous and the operators of the installations and the applications still do not want to become network operators.

Therefore it is necessary to be able to offer them a true "M2M network" so that they may concentrate on their applications and their businesses. This added value service is necessarily multi-machine and so homogenization of data and exchange formats is essential.

What technical infrastructure must a company manager put in place to operate his pool of remote machines?

Secure data recovery
Administration of the network of interconnection boxes
Service day and night
Remote access
Interconnection of the Information System



What must a company director do to make his M2M application efficient and long-lasting?

Project owner and principal contractor of internal and external businesses, often not under control?

For an effective, long-lasting system the company director must put in place a whole chain of technical participants, internal and external, outside his core business.

A computer architect and systems integrator to integrate and maintain this new system in his information system using specific and proprietary middleware

An installation and maintenance engineer to monitor the operational status of his connection box

A network administrator to optimize the use of the data transport networks, manage the available resources or those found lacking, and to check the accessibility of his machines

Someone to purchase a connection box supplied by an equipment manufacturer and which corresponds to his current requirements as much as possible

Someone working with the latter to develop his equipment in relation to the future developments of his computer installation and his application, if he does not want to find himself limited in its performance by the peripheral equipment one day.

However he remains more and more the prisoner of his pool of existing connection boxes.

Private network operator

In addition to his job as an operator, he will have to transform himself into a true private closed network operator, and thus be solely responsible for the performance of its maintenance and upgradeability.

What are the effects on the M2M market?

The return on investment for such infrastructures is long in coming.

This obligation to make a financial investment in a personal network and to support the unpredictable human and technical operational costs greatly limits decisions to set up such a system. For this reason the most developed applications are to be found in fields where there is great necessity or immediate savings are required: Supervision of industrial installations, Road haulage and logistics.

The solutions are not global.

As the sector markets are not sufficiently large, the M2M suppliers limit themselves to the building blocks of technology. This reinforces the power of the integrators. As the effects of volume in the market have not been achieved, the price remains high.

Each piece of equipment remains proprietary without possible interoperability.

At best the machine manufacturers (Automatons, Vehicles) provide them with connection equipment, making this a marketing asset and a natural tool to encourage customer loyalty. If there is no homogenization, each piece of equipment remains proprietary, and the operator remains the captive of his machine supplier.

No "virtuous circle" favoring market growth.

Up to date there has been no triggering of a "virtuous circle", a circle starting with the availability of terminals with minimum common functionality, followed by the availability of an M2M service, and finally sector applications developing not just as a single sector logic. It is obvious this lack restricts the take-off of a more global market.

How to start this "virtuous circle" for the M2M market?

Evidently to be able to have a true added value M2M service, the terminals must meet 2 characteristics:

- possess common basic functionalities (connection, transmission, remote administration) whilst leaving the place free for the necessary intelligence for sector applications. So the connection should be made as independent as possible of the machine connected.
- *have common data representation, at least for the data necessary for the operation of the M2M service to make the data independent of the network.*

Appliance: Intelligent, open system, dedicated to one function: M2M.

These terminals, whilst remaining integrated become true "**M2M Appliance**". This is the best way to provide minimum **homogeneity** with maximum **interoperability** of different systems within one same operational application for remote machines.

Alone the homogenization of the terminal principles will not be enough! In fact a large part of the setting-up costs still rest in the interconnection of information systems. An M2M service of sufficient value will not, therefore, exist without high level interfaces with the applications, interfaces which are defined by the technological standards of the market.

How has KERLINK transformed this structural obligation?

KERLINK has developed a global M2M offer around 3 propositions for M2M application developers and operators of pools of fixed or mobile machines:

An M2M, WIRMA® (Wireless Intelligent Remote M2M Appliance) interconnection box. Depending on requirements it can have most of the physical interfaces for connecting it to machines and captors embedded.

This equipment using Linux contains:

KMAB® (Kerlink Machine Application Base) an automaton allowing the integrator or the operator to configure his application easily according to his own requirements.

KMIB® (Kerlink Machine Information Base) the description of the basic M2M data and the potential to describe the new data linked to the application.

As an option for mobile applications, WIRMA has a GPS component and specific associated functions (positioning, entry and exit of the area, route, and itinerary) embedded.

A true added value M2M service around its mediation platform: **WANESY® (Wireless Appliances Networking System).**

This manages all the data transport interface on the wireless networks (GSM / GPRS / UMTS / WIMAX) and supplies the high level interfaces with the client information systems.

Kerlink takes charge of the complete administration of the networks and connection equipment, and offers its client remote WEB access.

The client pays invoices for subscription to the services.

Registration of new equipment is simple to perform and to invoice.

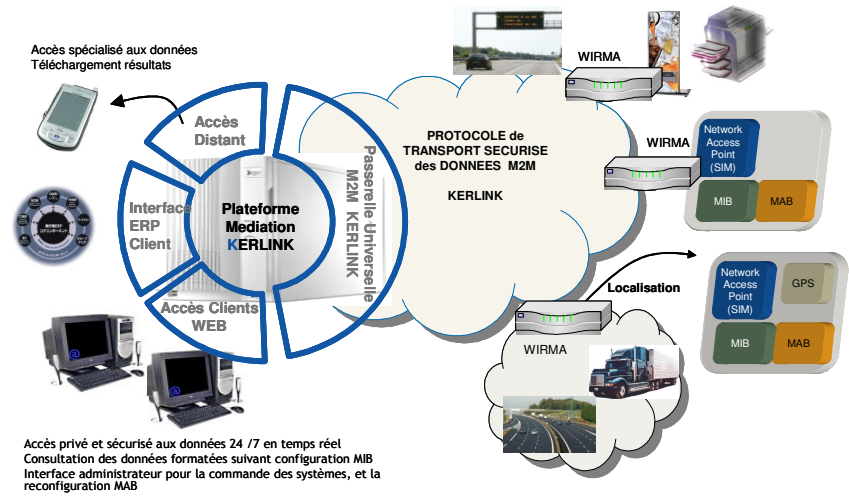
An M2M data transport protocol.

This machine application protocol safeguards transported data and optimizes exchanges. It operates above the Internet protocol (IP).

Without data loss or corruption, or intrusion risks, the data is transported at minimum cost.

So what are the benefits for the clients of a global M2M service?

- Data security
- Access protection
- Exchange optimization
- Multi-machine
- Configurable
- Remote access
- Day and night service
- Limited investment
- Subscriptions



They entrust the technical operation of the network service to a competent third party.

They benefit from a secure network as if they had set it up themselves, thanks to their **Virtual Private Network**.

The service ensures the availability of the resource and data integrity.

They no longer deal with the upgradeability of the technology and the terminals.

They simply subscribe to new sites.

They no longer have to support investment costs apart from those for their own machines.

They keep their operating costs as low as possible.

Their only worry is the quality of the Services and carrying out their own business!

Being assured of the quality of the M2M service.

Concentrating on the performance of their own business.

Assuring their clients of their quality of service.