<table>
<thead>
<tr>
<th>Names</th>
<th>Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christophe BEGIS</td>
<td>VERNET / Director of Information Systems</td>
</tr>
<tr>
<td>François BRUNET</td>
<td>RIETER AUTOMOTIVE FRANCE / Logistics Manager</td>
</tr>
<tr>
<td>Jacky COUSIN</td>
<td>GALIA / Director</td>
</tr>
<tr>
<td>Dominique DE BENGY</td>
<td>RENAULT / Manager of the Department Process Organisation</td>
</tr>
<tr>
<td>Marc PASQUET</td>
<td>MICHELIN / OE Account Executive</td>
</tr>
<tr>
<td>Didier FEGLY</td>
<td>SACRED / Chairman and Managing Director</td>
</tr>
<tr>
<td>Annick GENTES-KRUCH</td>
<td>PSA PEUGEOT CITROËN / Manager B2B (Vice-Chairman of GALIA)</td>
</tr>
<tr>
<td>Michel GODIN</td>
<td>FAURECIA / Manager of Purchase Information System</td>
</tr>
<tr>
<td>Pierre JACOBS</td>
<td>ARCELOR AUTO / CLS Manager (Client Logistics &amp; Services)</td>
</tr>
<tr>
<td>François BLANC</td>
<td>VALEO MANAGEMENT SERVICES / Group Director, Information systems</td>
</tr>
<tr>
<td>Antoine MOGLIA</td>
<td>GLAVERBEL FRANCE / EDI Manager</td>
</tr>
<tr>
<td>Richard PIMENTA</td>
<td>RENAULT / Director B2B</td>
</tr>
<tr>
<td>Jean-Luc SALAUD</td>
<td>HUTCHINSON / Director of Group Strategy</td>
</tr>
<tr>
<td>Didier VIGOUROUX</td>
<td>MAGNETI MARELLI MOTO PROPULSION / Managing Director</td>
</tr>
<tr>
<td>Jean-Claude VINCENT</td>
<td>PSA PEUGEOT CITROËN / Director, Supplier Resources and Logistics</td>
</tr>
<tr>
<td></td>
<td>(Chairman of GALIA)</td>
</tr>
</tbody>
</table>
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  • FUNCTIONING/OPERATING MODE

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GALIA teams (Committees, Working groups, Project Leaders) were the most productive in the European Odette community. Thanks to their works, many recommendations have been carried out in Logistics, Engineering and B2B domains.

A recommendation only makes a sense if it is used by the actors of the domain. To accelerate these implementations, we have widely communicated, trained in Logistics and EDI areas and also showed the benefits of using standards.

This management report, detailed and illustrated by some companies’ testimonies, is the proof of our added value for the automotive community. You will discover there many ways of progress and profits done by partners.

Within this framework, A.L.F.A. project gives importance to second-tier SME and helps them to roll-out ITC tools to improve their competitiveness and their responsiveness. The 112 pilot projects launched in 2006 reflect leaders’ attraction towards this action. Current & future regional sponsors are all mobilised for the deployment phase.

GALIA collaborators and I are available to support you, whatever your problem is, and to allow you to reach industrial excellence.

I wish you a pleasant reading of this third management report.

Jean-Claude Vincent
Chairman of GALIA
GALIA is a French organisation governed by the French law of July, 1st, 1901. It was created in 1984 because of an urgent need for improvements in exchanges between partners in automotive industry.

GALIA counts approximately 400 member companies to date:
- Industrial companies (car makers, equipment specialists and other suppliers)
- Service provider companies (information, logistics providers, carriers)
- Organisations

THE MISSIONS OF GALIA ARE VARIED

- GALIA develops recommendations for the product and information exchange between partners of the automotive industry
- GALIA provides its members with recommendations
- GALIA promotes implementation by the automotive industry companies of solutions resulting from these recommendations
- GALIA contributes in the production of tools in conformity with the specifications of these recommendations
- GALIA informs the potential users of these tools
- GALIA represents and stands up for its members’ interests close to the French, European and international organisations working in the same areas and on the same topics.

AREAS COVERED

- Logistics
- Engineering
- Electronic trade (B2B)
- ENX (European network, private and secure)

FUNCTIONNING/OPERATING MODES

- The Board of Directors
  Is composed of 14 members (2 from PSA, 2 from RENAULT, 10 suppliers). The Board elects the Chairman, the Vice-Chairman and the Treasurer
- The Executive Committee
  It is composed of the Director and the Projects Managers of each domain
- Logistics, Engineering and B2B committees
  Each committee has a Chairman, a Project Manager of GALIA and representatives of the members.
- ENX users group
  It is composed of a Chairman, one Project Manager of GALIA and representatives of member companies. The Director of ENX participates in this committee.
- The National & Strategic A.L.F.A. Management Committees
  Each committee is composed by representatives from GALIA regions, representatives from suppliers of rank 1 and 2 and some representatives from regional promoters.
GALIA’S RELATIONSHIPS

IN FRANCE

GALIA develops relationships with many technical federations and committees particularly:

- GS1 France (ex. GENCOD),
- FIEV (Suppliers for Vehicles Industry Federation),
- CCFA (Automotive French Supplier Committee),
- CLIFA (Automotive Supplier Connection Committee) composed by FIEV, SNCP, GPA, FIM, FIEEC, French foundry workers
- CGI (Wholesale and international business),
- Numerous institutional bodies within the scope of the A.L.F.A. project such as MINEFI, Regional Councils, Chambers of Commerce, DRIE, CETIM, CTDEC, CTN, PN2E, PERFORMANCE 2010, PERFO EST, PPRA, CGS (Ecole des Mines de Paris), Automotive area for the Central Region, Pôle d’Excellence Automobile of Champagne-Ardenne, FIEEC.

GALIA is the French member of the European body Odette International composed of eight members: GALIA in France, VDA in Germany, ANFAC in Spain, SMMT in England, Odette Sweden, Odette Czech Republic, Odette Benelux, Odette Romania and Odette Turkey.

IN EUROPE

GALIA takes part in global projects with the AIAG (American) and JAMA/JAPIA (Japanese) organisations.
Approximately 150 recommendations have been drawn up since 1984. The members of GALIA can consult all documentation on our site (www.galia.com).

Two possibilities are offered by the website: a public and private area. Only members of GALIA can enter the private area. Each month more than 12,000 people consult our site. The monthly “GALIA Newsletter” covers a main topic, a testimony and current news. A specific part has been created for A.L.F.A. project.

- **Conference and forums**
  GALIA can organize an annual conference in France as well as regional forums in collaboration with local partners.

- **“GALIA’s Webinar”**
  Every two months a seminar by Web conference is organized. The aim is to use Internet tools to connect a speaker with an audience of several hundred in their office.

- **Service provider club**
  GALIA organizes at least one meeting a year to inform the solution provider members of GALIA of the current and future projects.

- **Collaboration area**
  The solution provider members have an area allocated to them exclusively to present their products to the whole French speaking automotive community.

### TRAINING COURSES

The training courses programme is as follows:

- **Introduction to technical electronic exchanges in the automotive industry**, EDIFACT,
- **Standards used by car-makers (Messages, DN, Labels)**, training courses in French and in English,
- **Introduction to XML**,
- **Engineering training courses (in development)**,
- **Logistics Key Performance Indicators (LKPI)**, training courses in French and in English,
- **Introduction to Global EVALOG (MMOG/LE)**, training courses in French and in English,
- **Global EVALOG (MMOG/LE)**, practical training course in French and in English,
- **A.L.F.A. Consultants**.

All details are available on the GALIA website: www.galia.com
HOMOLOGATION OF SOLUTIONS

Web EDI makes it possible to exchange data corresponding to particular functional needs (Logistics and accounting) with partners, through forms accessible on a computer and an Internet connection. By the end of December 2006, GALIA had approved 4 applications in conformity with the Odette e-forms V2 recommendation (three other applications are being developed).

SUPPORT

If they want, active member companies can be supported by GALIA in implementing all or part of their logistics or EDI project. The Project Managers of GALIA act as advisers.
“The dynamic initiated in 2005 in the logistics domain goes on… 2006 was again a rich and fruitful year where the role of GALIA was legitimated and recognised for its added value at both France and European levels. There are several reasons to explain this success. Among them, we can point out the following:

■ The quasi systematic adjunction of expected benefits headings, a communication plan and a training kit to the new recommendations.
■ The launch of surveys to users of recommendation to allow the capitalisation of the best practices.
■ The determination in Odette to work on global projects by taking into account the increasing cooperation with similar associations: AIAG in USA and JAMA-JAPIA in Japan.

Among the important points in 2006, we can highlight the following:

➞ 4 new recommendations were issued: 2 at the global level (the revision of global MMOG/LE and the definition of Logistics Key Performance Indicators) and 2 at the European level (Traceability of parts and components and container management).

➞ 2 surveys were conducted on the use of our standards (Global MMOG/LE and labels OTL1/OTL3).

➞ The integration of the Eastern European Countries into the Odette community has continued and 2 new countries are member of Odette from this year - Romania (January 2006) and Turkey (June 2006).

➞ The number of participants in GALIA and Odette Logistics Committees has again increased. In 2006, VOLKSWAGEN, DACIA and DELPHI have mandated representatives to the Odette Logistics Committee that now counts 24 permanent members while the GALIA Logistics Committee counts now 17 members.

➞ …

These accomplishments are the results of your involvement in the different working groups. The great value of your experts allows the development of standards which respond to the automotive industry concerns. Thank you for your implication…

The coming years will fall under the continuity of 2006, taking into account, in particular, issues from carriers and logistics service providers who become important actors of the value chain.

GALIA have to remain the catalyst of the needs allowing reaching the best performance between partners in the automotive industry while taking care of the strict respect of the published recommendations”.

Bruno SCHWEITZER
THE NEW RECOMMENDATIONS

LOGISTICS EVALUATION: REVISION OF GLOBAL MMOG/LE (SEPTEMBER 2006)

Over the past two years, Global MMOG/LE was recognized on both sides of the Atlantic as the standard for the assessment of logistics organisation and for the management of continuous improvement in the automotive supply chain. The success of the trainings proposed by the AIAG (Automotive Industry Group Action), GALIA and the other national entities members of Odette, shows the interest of car makers and part suppliers for this set of benchmark criteria.

Today, the feedbacks we have received and the survey that we have recently conducted on its use, show that this tool is mature and that it is fully integrated into the practices of many companies, as well internally as in their relations with their partners. This wide roll-out of this recommendation made possible the emergence of few imperfections and of new ideas to improve it by becoming more user-friendly. The AIAG and Odette took into account these remarks and worked together to make the appropriate changes.

The new version of Global MMOG/LE is available since September 2006, and like the previous one, it can be downloaded for free from the GALIA website.

The main modification made is related to the assessment process. Henceforth, considering that a criterion is “not applicable” has to be a common decision between the auditor (or the customer requesting the assessment) and the evaluated company. From now it is a two steps process. First, the auditor (internal or external) must consider that the “Inapplicable” criteria are unsatisfied. Thus, he penalises the evaluated company by negatively impacting the result of the evaluation. Then, when analysing the results, the auditor and the evaluated company must reconsider these criteria and validate their inapplicability. When it is confirmed, the auditor must amend his evaluation and validate the criteria as being satisfied. Thus, the evaluated company recovers the lost points. If not, the evaluation remains unchanged. Finally, if the evaluation integrates at least one “inapplicable” criterion, the auditor must explain the reasons justifying this decision in the “comments” box associated to each question and the statement “This assessment contains concessions received from specific customers. Refer to optional comment boxes for detail” must be filled in the sheet “Scoring Summary” in order to highlight this variation within the assessment scope.

In addition, the automation of the Excel tool was improved. By a simple click on the box associated to a criterion, a cross is put there to materialise the compliancy between the evaluated process and the requirement expressed by the criterion. A second click allows removing the cross. In the same way, a check box was added in the sheet “Gap Analysis” to facilitate the display of lines corresponding to all the criteria and not just the ones associated to the unsatisfied criteria as proposed by default.

The other modifications are mainly semantic and aim to detail questions, criteria or justifications whose interpretation could be difficult.

LOGISTICS PERFORMANCE INDICATORS: KPI RECOMMENDATION FOR GMML (DECEMBER 2006)

This global recommendation entitled “Key Performance Indicators for Global Materials Management and Logistics (KPI for GMML)” is available since December 2006. It defines 6 Logistics Performance Indicators common to suppliers and customers for parts and raw material deliveries in serial production:

- KPI for GMML n°1 = ASN performance,
- KPI for GMML n°2 = Delivery accuracy,
- KPI for GMML n°3 = VMI Indicator
- KPI for GMML n°4 = Material Handling and Identification,
- KPI for GMML n°5 = Production disruption
- KPI for GMML n°6 = Supplier Communication and Cooperation (Measurement of performance for the 3 following processes: reception of delivery requests, processing logistics incidents, cooperation on logistics projects).
**TRACEABILITY: ODETTE RECOMMENDATION FOR PARTS AND COMPONENTS**

TRACEABILITY (MARCH 2006)

This European recommendation issued in March 2006 defines the different levels of traceability that can be required for parts and components. It also gives models of identification to easily fit these requirements on “Traceability”.

**PACKAGING: ODETTE RECOMMENDATION FOR CONTAINER MANAGEMENT**

(DECEMBER 2006)

This European recommendation was issued in December 2006. It describes the common process to manage returnable packaging (coming from the GALIA recommendation GED V4).

It also defines 2 options to exchange data regarding packaging management:

- The fully electronic exchange based on EDI or XML
- The exchange of data using a web-based application compliant with the standard electronic messages.

**PACKAGING: PROCEDURE FOR THE ERGONOMIC RULES**

(JUNE 2006)

This document was issued in the first half of 2006. It is the result of a common work between the ergonomic sections of two car makers: Renault SAS and PSA PEUGEOT CITROËN. Its purpose is to formulate homogeneous and convergent recommendations related to reusable containers (Reduction of the packaging tare weight, integration of handles to facilitate handling, improvement of folding and unfolding procedures).

The goal of this document is to be used as a basis or a pre-requisite by trade experts in the development of technical solutions when changing or renewing reusable containers, whose roll-out remains a target of the current industrial production systems.

**PACKAGING: COMMON RULES FOR INVENTORY COUNTING**

(DECEMBER 2006)

This procedure, prepared by RENAULT SAS and GEFBOX SYSTEM, describes the functional process to be used by a supplier to manage a physical inventory counting. These rules aim to answer concrete problems faced by the automotive industry actors due to the existing mix of GALIA-packaging populations among the different actors of the supply chain.
In 2006, GALIA followed the roll-out of this recommendation (see the experience of Julien Cordovan from the supplier performance management department of RENAULT).

LOGISTICS PERFORMANCE INDICATORS: ODETTE LKPI RECOMMENDATION

The management of the logistic performance is based on a restricted number of indicators all consultable by RENAULT and its suppliers in IPPRF Logistic website (the RENAULT system monitoring Suppliers Performance Indicators). This shared vision makes possible to enter into a virtuous circle where action plans and their weekly-based follow-up process can be set-up by all the actors of the supplying process.

In order to go further on the management of supplier performance with IPPRF Logistic indicators, RENAULT has also adopted the Odette LKPI (Logistic Key Performance Indicators) recommendation.

First of all, CINDI project will allow a more accurate follow-up of the inbound flows based upon the RAN number. Thanks to this, an Odette Service rate will be available in IPPRF Logistic for every plant using the CINDI management mode. The calculation of this service rate will rely upon the reception of each RAN and will check the respect of the timeslot and the quantities at the departure or at the arrival according to the supplier logistic agreement / Incoterm.

To improve the logistic incident tracking process, GQE project (Inbounds Flows Quality Management) will be rolled-out in the first half of 2007 to all the Renault plants and to their suppliers. The following functions will be available:
- Declaration of logistic non-conformities which will be accessible online.
- Management of 8D for Logistics: Formalisation of action plans related to non-conformities as defined in the Odette recommendation.
- Chargeback: Invoicing of the discrepancies caused by an incident due to a supplier.
- Visits Management: Shared vision of the actions in progress between RENAULT and the supplier.
- Management evaluation: part controllers can evaluate the quality of the relationships between RENAULT and the suppliers he works with.

Thus, GQE will allow IPPRF logistics to clearly distinguish the major incidents having an impact on the production (incomplete items, production stops ...) from those that generate only administrative or physical disturbances. For these last incidents, considered as minor, a categorisation according to 4 classes was planned: packaging, delivery documents, labels, transport. These modifications will be available as soon as GQE tool and the associated processes will be in place.

Feedbacks of Julien Cordouan (RENAULT)

Julien Cordouan (RENAULT)

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General vision of IPPRF in February 2006

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2005 July to Dec. cumulated</th>
<th>6 months Cumulated</th>
<th>November</th>
<th>December</th>
<th>Demerit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODETTE delivery accuracy</td>
<td>83 %</td>
<td>87 %</td>
<td>82 %</td>
<td>84 %</td>
<td>100</td>
</tr>
<tr>
<td>Daily respect</td>
<td>94 %</td>
<td>94 %</td>
<td>93 %</td>
<td>95 %</td>
<td>50</td>
</tr>
<tr>
<td>ASN quality</td>
<td>87 %</td>
<td>87 %</td>
<td>91 %</td>
<td>97 %</td>
<td></td>
</tr>
<tr>
<td>Effects on production - Impacts</td>
<td>98</td>
<td>92</td>
<td>11</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Effects on production - declarations Nb</td>
<td>9</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Minor incidents causes</td>
<td>23</td>
<td>23</td>
<td>4</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total shortcoming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>165</td>
</tr>
</tbody>
</table>

As a consequence, these LKPI will make Renault and its suppliers able to carry-out a better management of their relationship and consequently to reach a better logistic performance.
Deployment survey:
Concerned to know what the added value of the Global MMOG/LE training courses is, on both personal and company levels, Odette issued a questionnaire for the trainees who attended the various sessions. 20 questions were sent to those concerned. The aim was to obtain a maximum number of answers by the end of April 2006. Out of the 460 individuals questioned, 40% answered. A summary of their answers is available on the Odette website.

Packaging: GALIA recommendations for returnable packaging management (GED4)

Mrs. Lemaître, what is your function at MGI COUTIER?
I assist the Operations Director of MGI COUTIER in the preparation of the Industrial Strategy, notably for the international logistics, in the installation of new operations abroad and in the improvement of the delivery process management tools.

Tell us about the returnable packaging management recommendation.
Packaging management became an important topic for all our Customers.

The recommendation on this subject, GED 4, validated by the GALIA Logistics Committee, allowed setting-up common rules for packaging management to improve the service rate and to achieve the flow tracking on both physical and information aspects. Relying on this recommendation, RENAULT and PSA (through Gefbox) have developed web-based applications to support container management.

How did your company experience the availability of these systems?
At MGI COUTIER, packaging has always been considered as a part of the finished good and as a basic element of our operational management.

Internally, we experienced the arrival of these tools as an opportunity allowing:

1. To limit shortages and to anticipate needs thanks to the information sharing about movements, stocks… It should be noted that this point is still a main axis of improvement. Moreover we are pilot with one of our customers for the roll-out of a tool giving the tendency of the functional end-of-month credit;
2. To highlight possible discrepancies, to find their root causes and to set-up the appropriate action plans thanks to the tracing and to the follow-up of flows;
3. To make actors more responsible.

Have you seen an improvement in packaging flows since the arrival of the RENAULT/GEFBOX management systems relying upon the GALIA recommendation?
The improvement is clear even if, from an operational point of view, all the problems have not been solved. Difficulties still persist but they should be solved sooner or later, thanks to the use of the tools and to the implementation of the required adjustments and modifications in our customers’ systems. As our customers’ returnable packaging management systems are different, the approach of the GALIA recommendation is naturally different; therefore the success relies upon the information and the training of the end users for each of these applications. This effort must be permanently maintained.

Finally, progress is real but it will be amplified by a better use and by a convergent evolution of B2B applications.

Remarks in conversation with Thierry Koscielniaik
(Logistics Project Manager)
You attended a one-day training course on Global MMOG/LE the 12\textsuperscript{th} of September of 2006 at GALIA. What do you think about this training?

I thought that this training was very concrete and the trainer very interesting. It is an excellent introduction to the subject and to be able to present it in the company.

Have ARCELOR already rolled out this recommendation?

So far, it is a project being set-up as a pilot on our site in Dunkerque. ARCELOR have planned to roll it out on all their sites at the beginning of January 2007.

How is this pilot set up?

The set-up is done by meetings (3 up to now) held by operational managers. These meetings allow knowing what it is possible to do with the skills from people around the table.

This method is appreciated by the local staff, it is very structuring and it is a positive way of managing.

Does this pilot work?

For the moment, we still do not have enough persons involved to make it start. Until now, there is a central team in charge of managing the local teams to set-up this tool. Anyway, this tool will be adopted, because it is not expensive and it can be implemented by us, without external intermediary.

Only one person is necessary to follow the training and then to teach the concerned people in the company. It is not a “procedure” but it is something concrete and useful.

Remarks in conversation with Thierry Koscielniak (Logistics Project Manager)

Testimony on the Global MMOG/LE training:

M. Khoa Phung, Customer Logistics & Services Manager at ARCELOR AUTO

Web EDI allows exchanging data corresponding to specific functional requirements (logistics and account-related) with partners by using forms that can be accessed on a PC connected to internet.

In 2006, GALIA created a Web EDI user club which aims:

- To focus on the homologation of solutions based on the Odette e-Forms V2 recommendation (4 solutions are currently approved: COVISINT, TX2, TENOR CONSEIL, PLANEXWARE (Argentinian company) and 3 are inside the homologation process (GXS, Supply On, and AZERTIA).

- To work on the robustness of the homologation process before the study of future applicants in defining the expectations regarding each criterion of the homologation scoring grid and in formalising the process chronology and content.

- To make a systematic survey on the roll-out of the approved solutions.

Brochure on the Logistic evaluation

In order to promote the Logistics evaluation using Global MMOG/LE, GALIA realised a brochure aiming to present these benchmark criteria through experiences of those recommending and/or using it. This brochure can be downloaded from the GALIA Website.

In a few words, can you please introduce your company and your function?

HONEYWELL TRANSPORTATION SYSTEMS is a group producing and distributing equipments and products for automotive industry, in particular under the brands BENDIX/JURID (braking), GARRETT (turbocompressors and heat exchangers), HOLTS, PRESTONE, START PILOTE (up keeping products), FRAM (filtration), AUTOLITE (spark plugs)...

Within the data-processing direction of this group, I am responsible of EDI projects for Europe, India and Brazil.

Could you make a summary on the roll-out of Web EDI in your company and present us perspectives for 2007?

EFI and Web EDI solutions complete traditional EDI and make possible to roll-out EDI to companies previously excluded for financial or organisational reasons. Indeed, the implementation of an EDI system is still expensive for a small company, and its maintenance requires technical skills which are not often available internally. With as a catalyst an industrial environment where modes of exchange change more and more quickly, and not always in the direction of a greater standardisation, we understand the success of these alternative solutions which make possible, for instance, to quickly answer an isolated customer request for a low cost, or to outsource the complex data exchange management while benefiting of substantial savings related to the mutualisation of the maintenance and of the system exploitation.

However it is necessary to moderate: today, in Western Europe, a great number of companies in the automotive industry is already equipped with EDI solutions. There, the market for alternative solutions is thus small. In the opposite, there is an incontestable potential of growth in the countries appearing as new sources of supply for the great actors of the sector: Eastern Europe, India, China...

Finally, it is necessary to keep in mind that EFI is a solution requiring manual operations and which can not bring the same benefits on productivity than an integrated and automated solution. It is always necessary to analyse the frequency and the volume of the information exchanges before choosing a tool (or to recommend one to its suppliers).

For instance, our Honeywell Europe Turbo Technologies division orders more than 80% of their supplies of components by EDI with about sixty suppliers. Among whom, less than ten use EFI or Web EDI solutions. Actions are planned for 2007 in order to increase the number of connected suppliers. But from now, our efforts will mainly consist in more thoroughly exploiting the connections in place, in particular by generalising the use of messages that we currently use with a few of our pilot suppliers. These messages are the advanced shipping notice (ASN), the Kanban call-off or the consignment stock monitoring.

You took part, at GALIA, in a Web EDI working group seeking to standardise the process of homologation of solutions. Why create such a working group and what is its aim?

By answering more and more complex data-processing and logistic problems, Web EDI solutions become comparable with small business applications, and consequently, it becomes impossible to study them in a 3-hour homologation meeting. The different juries organised last year brought us the obvious proof of that (systematic overflow of assigned time, impossibility of checking certain points...). In addition, the activity of the members of these juries does not allow them being transformed into beta-testers of software. It seemed thus necessary to develop a new homologation process based upon already existing processes (the self-evaluation for example) and allowing to the members of the jury to save time, while allowing them to reinforce the control process and to guarantee the same treatment to every applicant solution. We also try to integrate the possibility of reviewing the homologations in the case of standards or clients' specifications change.

Experience of Philippe Hamelin (HONEYWELL)

For instance, our Honeywell Europe Turbo Technologies division orders more than 80% of their supplies of components by EDI with about sixty suppliers. Among whom, less than ten use EFI or Web EDI solutions. Actions are planned for 2007 in order to increase the number of connected suppliers. But from now, our efforts will mainly consist in more thoroughly exploiting the connections in place, in particular by generalising the use of messages that we currently use with a few of our pilot suppliers. These messages are the advanced shipping notice (ASN), the Kanban call-off or the consignment stock monitoring.

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Remarks in conversation with Thierry Koscielniak
(Logistics Project Manager)
This catalogue gathers the whole range of GALIA standard containers established by the “Packaging Standardisation” working group. It recapitulates, for each of them, their dimensions and their existing references. It allows the whole automotive community to know every single standard packaging existing within GALIA.

It is a very helpful work within the framework of a roll-out in a factory.

This document is regularly updated because of the containers evolution and the growing of the range.

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Roll-out follow-up:
Thanks to a questionnaire prepared at the European level, Odette carried out a survey to know the car makers and tier-1 suppliers requirements in terms of identifications. A summary of the collected answers is available on the Odette website.

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M. Pignard, could you present in few words your function at HEULIEZ?

HEULIEZ is a vehicle equipment supplier specialised in the areas of stamping, body in white modules, painting of modules, mechanisms and modules assembly and HEULIEZ is also a partner of manufacturers for the complete assembly of vehicles.

The mission of the HEULIEZ supply chain management department is divided into 3 activities:

- To define and implement new logistics projects dealing with the complete logistic chain from the receiving of the customer order to the delivery at the final customer on its various sites.
- To implement important evolutions like setting ex-works Incoterm with our suppliers and investigate on new processes like RFID.
- To assist operational teams to improve the logistic processes during the serial life and when important events such as the changes in production rates occur.

What kind of label does your company use and what are your requirements when dealing with your suppliers?
Almost 20 years ago, HEULIEZ implemented the radio frequency and created its own format of label based on A5 format stickers with 3 small “butterflies”. By the time, this identification label has become dedicated to each activity.

We do not ask to our suppliers to respect a particular kind of label because all the containers (plastic boxes, cardboards, pallets or stillages) are relabelled when received in order to internally ensure an accurate traceability.

We fit our customers’ requests for the labelling of finished goods (shipment of goods).

Do you plan to change your identification model? If so, towards which standard would you switch?

It is very difficult to change a specific label, because each actor has his own requirements. We mainly deliver UH (Unity of Handling) to
our customers. As the other suppliers of PSA, we now use the ETI9 format.

This evolution encourages us to redefine our various labels for our internal flows and to define a label based upon both the ETI9 standard and the currently used label at Heuliez. We need to maintain an easy reading thanks to a great height of the label numbers. This is impossible with ETI9 but we want our storekeepers and forklift drivers to find the same information at the same location on the “Heuliez” label as well as on the ETI 9.

Our expectations towards these evolutions: time saving when storekeepers seek information on the label whatever the workshop or the store; financial savings because the new label is cheaper than the old one; quality increase because the risk of misreading is reduced.

Finally, we will ask our suppliers to label the UH with ETI1/OTL1 labels and the UC with ETI9/OTL3 labels.

Remarks in conversation with Thierry Koscielniak (Logistics Project Manager)

Capitalising on good practices:

In order to follow-up the roll-out of the new ETI 9/OTL 3 label, GALIA, PSA and RENAULT jointly organised a feedback from the suppliers already having implemented this new format. The aim was to identify suppliers’ best practices in order to reduce implementation costs and to facilitate the deployment of this label. A summary of these activities is available on the GALIA website.

SUBJECTS IN PROGRESS

BROADENING OUR MEMBERSHIP TO INCLUDE CARRIERS AND LOGISTICS SERVICE PROVIDERS AND TO CREATE NEW WORKING GROUPS

Since January 2006, carriers and logistics service providers can become member of GALIA and contribute to improving the exchange of views and information within the automotive industry. Since then, we count several new members: LE-RAY Transport and Logistics, GEFCO, GEODIS, DAHER...

In order to take into account the expectations of these activities, GALIA created a working group called “Carriers & Logistics service providers”. The goal of this group is to collect the needs of these actors of the Logistics (Recommendations, trainings...) and then to submit them to the GALIA and Odette Logistics Committees.

Experience of Jean-Philippe de Valmont, Automotive Division Director, DAHER International

What is your function at DAHER International?
Automotive Division Director, I am responsible for both operational sites and business development, in France as well as abroad.

DAHER became member of GALIA in the 1st half of 2006: what was your motivation in joining GALIA?
In 2005, DAHER created a division dedicated to the automotive industry. This decision is in line with our sector policy already well implemented within the aeronautic industry.

As this sector is in development and requires industrial services, it is extremely important to master all the existing standards of the automotive industry. It is our first motivation to join GALIA.

In addition, we understood that GALIA evolved with recent integration of logistics operators. Daher is very happy to contribute to the development of the standards dealing particularly with automotive logistics, and to take part in the working groups on many identified topics.
Through GALIA, we also wish to develop contacts in the automotive industry to improve our services and to accompany potential customers in their projects.

Among the activities of GALIA/Odette, which subjects are the most interesting for you? The standards dealing with Quality, with the Logistics Service Providers’ evaluation and with RFID.

Remarks in conversation with Thierry Kossiclniak (Logistics Project Manager)

**LOGISTICS PERFORMANCE INDICATORS (CARRIERS & LOGISTIC SERVICE PROVIDERS)**

This European project intends to define common Logistics Performance Indicators (for CARRIERS & LOGISTIC service providers) within the European automotive industry. A working group was initiated in November 2005. A recommendation is to be published by the end of 2007.

**LOGISTICS PERFORMANCE EVALUATION (CARRIERS & LOGISTIC SERVICE PROVIDERS)**

This global project aims to define logistics performance evaluation benchmark criteria for carriers and logistic service providers. This recommendation will be based on the existing version of Global MMOG/LE. This release is supposed to be complete in the second half of 2007.

**USE OF STANDARDS IN EMERGING MARKETS (EASTERN EUROPE AND CENTRAL EUROPE)**

This roll-out project firstly aims to promote the use of the GALIA/Odette standards from the logistics domain in eastern European countries (logistics evaluation, OTL1 and OTL3 labels, EDI messages (EDIFACT), Web EDI based on a solution based upon E-forms V2 and homologated by GALIA). This project also tends to enable these countries to become members of the Odette community in order to allow them to take an active place in the work done by this organisation. In January 2006, Romania became member of Odette, followed in June 2006 by Turkey. Slovakia is expected to join in 2007.

Experience of Jean Thuauadet, DACIA, Odette Romania Representative

What has justified the creation of Odette Romania? Many and many car makers and suppliers explore new markets (China, Eastern Europe, India...). So, it becomes evident to follow them in these emerging countries (in particular regarding the roll-out of GALIA/Odette standards). The acquisition of DACIA factories by RENAULT has accelerated this process in Romania where one understood the necessary to create a local Odette community relying upon ACAROM (manufacturers and suppliers Romanian Association).

How was Odette Romania created? In 2005, ACAROM approached GALIA in order to well understand the opportunities associated to the use of GALIA/Odette standards and especially to better apprehend the role of a national organisation in promoting them. After this meeting, Romanian association considered as useful to create an Odette entity on its own ground.

Which was the first concrete action achieved by Odette Romania? After the signature of Odette Romania creation in January 2006, I was in charge of a double mission. On the one hand, I was the Odette Romania representative for the Odette LFC and on the other hand, I was responsible for the launch of the Odette Romania logistics activities.
The Logistics Domain

In 2005, a visit of GALIA Logistics Committee to the Pole of Traceability in Valence (France), allowed us to make aware of the first pilot operations regarding RFID. Since this visit, several meetings at GALIA and Odette levels were held. An AIAG/Odette working group has started and will produce, at the end of 2007, several recommendations which aim to define single models for data exchange when using RFID according to the entity to be tracked:

- Use of RFID in unique identification of components in inbound material handling and logistics, including containers and transport packaging and Supply Chain Management. (ready to start)
- Use of RFID in production processes, e.g. Body construction, paint shop, final assembly, etc.
- Use of RFID in vehicle identification through vehicle life cycle after final assembly, including vehicle logistics (location, after-sales, recycling etc.) (ready to start)
- Use in unique identification of components for aftermarket and retail (e.g. tyres, etc.)

GALIA started to share these works with GS1 (ex GENCOD). A workshop on RFID took place on March 30th, 2006. The objectives were to present the standards, ISO rules concerning RFID and to present the position of the automotive industry. These two subjects were illustrated by testimonies from large distribution and automotive industry.

All European countries agree on the need of implementing and rolling-out this new technology in the automotive industry. Many retail groups (CARREFOUR, METRO), car makers (RENAULT, VOLKSWAGEN, VOLVO, DCX...), carriers and logistics service providers (i.e.: GEODIS) have already launched applications.

Can you briefly explain the aim of your pilot experience?

In its organisation, GEODIS has an Engineering Direction, which intends to maintain a technological survey in order to improve the logistic services carried out for our customers. Even if the technology is known from many years, the RFID really “emerged” at the beginning of the years 2000 when technological progress have allowed increasing the treatment capacity, miniaturising the components and reducing production costs to make them compatible with a widening of its field of application.

This emergence relied upon experiments relayed by the media dedicated to logistics, led the GEODIS technological survey group to follow their results. Disappointed by the observations carried out on those, but nevertheless convinced by the potential of innovation that RFID brings, GEODIS decided to internally carry out its own pilot with purely experimental ends.

This pilot was associated to three goals which consist of measuring the real technology performances on the whole of its components, evaluating the difficulties related to implementation, in particular in
the management of data exchanges with our information systems and apprehending the functional incidences of RFID on our business processes.

What are your conclusions about this pilot?
We aimed, as explained above, to “discover” the real possibilities of RFID technology and the conditions of its implementation in operational environments. As in any experimentation, the difficulties appeared where they were not awaited, but we had good surprises as well. We are very satisfied with this experimentation, because it enabled us to highlight essential points in the RFID development at GEODIS. In the most synthetic way:

- Technology works only in perfectly identified environment, as well in terms of technological solutions choice (material, standard, frequency...) as in terms of application field. It must remain in a completely mastered environment to manage checks which still are necessary to ensure a 100% reliable use in order not to regress when compared with the existing solutions.
- The integration of this technology with information systems respects the same logic as the existing exchanges with the usual means of capture and of restitution of information (bar codes, automats...). So we have not encountered particular difficulties.
- The contributions of this new technology should not make it a simple substitute of current technologies. It is necessary to benefit from its contributions to reconsider the existing processes.
- And then, it should be considered that the vulgarising of RFID in the monitoring of the circulation of products in an “completely open” environment is not possible, because it requires, not only standards harmonisation at the Global level, but also terminals adapted to these standards available, at the good place and at the good moment to capture information transported by RFID tag.

What are your expectations in dealing with Odette RFID working group?
We evoked in our preceding answer that the vulgarising of RFID technology relies upon a standardisation at the global level of technological standards (frequencies, signals emission power...) and of the chip content of data.

Without this standardisation, the RFID will still be used for niche applications. They will punctually allow for profiting from the advantages of this technology. But, by restricting the volume effect, this kind of applications would be an obstacle to RFID development because only generating a poor reduction of labels and terminals production costs.

GEODIS has perfectly identified each industrial or commercial sector which answers its market specific characteristics and thus we have to take into account these characteristics in the management of “cross-activities” exchanges.

That’s why we attend from the Odette RFID working group to standardise the data to be contained by the RFID labels and the associated management rules which will be used as support in the interactivity of these exchanges.

GEODIS assumed favourably this process and its integration into the Odette working group in order to take in account all supply chain actors expectations within the automotive industry.

Remarks in conversation with Thierry Koscielniak Logistics Project Manager

GLOBAL INVOICE : STUDY OF A GALIA PROFILE

Following the recent changes in terms of invoicing in Europe, at the request of vehicle manufacturers and number of parts suppliers, it was suggested that the invoice issue should be reworked and that a profile should be defined on the basis of the Odette “Global” data model. The selected Global InvoicV2 message is a model developed by manufacturers in the international automotive industry represented by 4 organisations: Odette, JAPIA, JAMA, and AIAG.

The GALIA Invoice working group has the following objectives:

- To define a GALIA “Invoice” profile based on the Global InvoicV2 message with identical functionalities to the currently used INVOICE5 and V3 messages (goods invoice, self-billing invoice, credit note, debit note, Proforma invoice). This new profile should be prepared for the first quarter of 2007. The GALIA Invoice working group decided to be focused on good invoices; and to treat the invoicing service in collaboration with GS1 in their "Service Invoices" working group.
- To look at the possibility of managing new functionalities such as: reference to tax exemption legislation, request for payment on account, request for repayment, and request for holdback.
- To overhaul the interchange agreement for the dematerialisation for tax purposes.
- To produce a guide of “best practices” on DMF with an appended summary of the statutory provisions with a major impact on DMF (e.g.: Article 289b, annex IV of the French General Code of Tax Law [CGI]). This guide will be produced in common with GS1.

PSA and RENAULT roll-out targets: new partners in EDI Invoice, essentially service providers, plus all partners making an express request for deployment.
What are your functions at PSA PEUGEOT CITROËN?
LB: I am in charge of the data acquisition sector within the shared service centre of the PSA PEUGEOT CITROËN suppliers accounting. This mission consists in integrating in our information systems, the whole invoicing of the PSA suppliers.
PT: I am in charge of managing all EDI flows within this sector. I am the EDI Invoice expert in PSA group. My mission is all the more important as 70% of the invoicing are in Electronic data interchange mode. I represent PSA in all the official authorities of which GALIA on this domain.

How many invoices did your shared service center treat?
LB: in 2005, we have treated in our SCS, 4,500,000 invoices for European automotive companies of the group.

What is the part of electronic invoicing?
LB: As you know, PSA generalized the use of EDI based on GALIA standards. Today, on 100 received invoices, 70 are in EDI, mainly in D96A Edifact standard profile Odette V5, that is to say 3,100,000 invoices in 2005. EDI in tax dematerialization only represents so far 10% of EDI invoice volume (310,000).

What is EDI in tax dematerialisation?
PT: not fiscally dematerialized EDI Invoice must be doubled by the sending of a paper form invoice which is considered as the only original document for the administration.

The 2001/115/ce directive of the European Council, as well as its national transposition, allows, under certain conditions, to remove this obligation of doubling the EDI INVOIC message with the paper form invoice. We speak then about tax dematerialization or DMF.

Why did PSA, as a major actor of EDI, decided to follow a policy of tax dematerialisation of the invoices?
LB: It is not an innovation for PSA because we use tax dematerialisation based on article 289b of the Tax General Code since the beginning of the Nineties. On the other hand, it is the generalisation of our request for tax dematerialization used by the whole of our suppliers in EDI Invoice which is a true innovation for 2006.

Over the past few years, PSA has observed main changes in the habits of management and accounting tasks procedures.

Which are these conditions?
PT: So that the EDI invoice message can stand as an original, the transmission system (translator) used has to ensure:
• The checking in emission and reception
• The conformity of the message structure compared to the mandatory mentions of the invoice
• The constitution and the daily filing of a summary list of the emitted and/or received invoices
• The constitution of a partners file with whom the company exchanges invoices by Telematic way
• The filing of these invoices (6 years plus the current year in fiscal law, 10 years in commercial law) in the initial EDI format without modification and deterioration.
• The invoices and summary lists restitution at the request of tax authorities.

GALIA: On which perimeter does PSA PEUGEOT CITROËN fiscally dematerialize?
PT: We practise the DMF invoices with the following entities of the group: PEUGEOT CITROËN Automobiles S.A. SEVEL - Nord Française de Mécanique PEUGEOT CITROËN Automobiles UK
To date, we do not practise DMF with Spain PCA because the European directive transposition in Spanish law imposes the electronic signature.
We also launch a study to widen the activity sphere of DMF in Slovakia.

Experience of Pascal Torchin and Luc Blond, Automotive Accounting Department of PSA PEUGEOT CITROËN group
Indeed, we note that the majority of our partners already dematerialise their invoices in their internal processes thanks to the data-processing tools extension among which the Electronic Management Of images (GED).

The result of this evolution of paper documents dematerialisation (order, invoice, delivery call...) naturally led to go a step further: the invoice tax dematerialisation between the different actors of automotive world.

**GALIA:** What are the advantages of the tax dematerialization compared to the invoicing by EDI without DMF?

**LB/PT:** Before speaking of DMF advantages, it is important to note the existence of a DMF requirement which is the enrolment and the implication of “PARTNERS”.

This approach is a Clients and Suppliers couple “mutualising” means for a shared profit. It is a concrete and voluntary reality for PSA to have this approach where we are not only an applicant but also a facilitator ready to go with our partners.

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### The advantages are numerous for the transmitter as well as for the receiver:

1 - Productivity improvement

<table>
<thead>
<tr>
<th>Process / Flow</th>
<th>EDI</th>
<th>DMF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order</td>
<td>No Change</td>
<td></td>
</tr>
<tr>
<td>Physical Reception</td>
<td>No Change</td>
<td></td>
</tr>
<tr>
<td>EDI Invoice</td>
<td>No Change</td>
<td></td>
</tr>
<tr>
<td>Paper invoice</td>
<td>Teletransmitted (faxed) paper form invoices management</td>
<td>Zero Paper</td>
</tr>
<tr>
<td>Matching</td>
<td>Semi Manual EDI Invoices checking/paper form invoices</td>
<td>Automatic</td>
</tr>
<tr>
<td>Archiving</td>
<td>Manual paper form invoices Classification and archiving preparation</td>
<td>Date-processing storage with controls in periodic invoices proofread (security on data integrity)</td>
</tr>
<tr>
<td>Dearchiving</td>
<td>Manual research of paper form invoices with additional costs of services and originals losses risks. Long invoices providing lead time.</td>
<td>Data processing, Regula Checking for data restitution integrity controlling with the output of legal states necessary to Tax authorities controls.</td>
</tr>
<tr>
<td>Tax control</td>
<td>Administrative Suppliers and/or Customers controls dullness dealing with Tax authorities due to un-archiving.</td>
<td>Easy flow of the automatic numerical data Checks part of the invoice for Tax authorities, Customers and Suppliers.</td>
</tr>
</tbody>
</table>

2 - The contribution of the DMF compared to Paper EDI

The coexistence of mixed paper and electronic flows is expensive and generates errors.

It allows saving the consistency checks between the accounting records (paper) and EDI messages.

*Information Uniqueness* because we often note, in EDI process, some divergences between the paper base (the invoice) and the EDI message (for example, invoicing dates different from the message which have accounting, financial and tax implications).

*Reduced Internal and external costs* for the company in charge of physical paper archiving and un-archiving.

*Deletion of the data entry errors* between invoice paper (removed) and EDI movements, inducing less number of invoices discrepancies.

*To tend towards the deletion of double treatments* (reinforced duplicate invoices management and control) since the emission of EDI DMF invoices does not generate any more paper and thus more reception paper of the invoices which can potentially involve risks of double payments.
3 - Other Advantages

Enhanced strength of the process and information flows by the means of additional controls related to tax and Community regulation. Traceability of emission and reception movements.

In conclusion, with the use of DMF, PSA takes part in the sustainable development, since reducing pollution and waste (more trees, less paper and fewer polluted water by this industry). It is the PSA policy to develop clean technological solutions.

- Diesel equipped with particles filters
- Alternative motorisation technology
- Fuel cell
- Water-based paint for its vehicles
- And finally, Invoice tax dematerialisation

Remarks in conversation with Nadine Buisson-Chavot
(EDI Project Manager)

FUTURE PROSPECTS

TRACEABILITY

Federal legislation in the USA defines the elements, in general those related to safety—which must be tracked. To comply with these requirements you must use ISO “techniques” for the automatic identification of parts and packaging containers and to manage that information in order to connect it to those provided electronically (EDI and IT systems in production). That has to be done from the beginning of the life cycle of each component right up to the end of the life of assemblies and whole vehicles (ISO definition). To date, there is no European directive that deals precisely with this point, but we need to prepare for one by basing our efforts on what does exist in the USA.

Each vehicle manufacturer is considering this issue internally. It may be thought appropriated to examine a transposition of the American work, adapting it to the modes of operation in Europe in order to provide elements to the European commission.

MANUFACTURERS’ FORECASTED DEMAND

Starting out from the DCP recommendation, RENAULT and PSA PEUGEOT CITROÊN decided to conduct a multi-customers trial on adjustment of the capacity to meet the demand - known as well as DCP, or “Demand Capacity Planning”. One of the first conclusions to be drawn from this study is the necessity to define a standard model of firm orders and forecasts to fully profit of the recommendation advantages.

From this report, the Odette Logistics Committee could plan to carry out a benchmarking in order to identify the good practices that allow a better collaboration between suppliers and vehicle manufacturers, but also to anticipate and resolve capacity issues.

This study would include an analysis of the current situation (expression of firm orders and forecasts used by the European manufacturers) and a summary of the suppliers’ perception on these needs expression (What information would they like to find in these requests?).

LOGISTICS EVALUATION: GLOBAL MMOG/LE BENCHMARK CRITERIA

Beyond the benchmark criteria, several subjects seem to appear around the Logistics performance evaluation:

- Some manufacturers wish to define a standard process to manage Global MMOG/LE evaluations that are required by the majority of the customers (manufacturers or first tier suppliers) within the roll-out of their Logistics policy to their suppliers. This project would make possible to have:
  - A standard mode of communication in the customer/supplier relationship regarding Global MMOG/LE
  - A shared monitoring of suppliers’ evaluation results (and associated action plans)
  - A standard data base of good and bad suppliers’ practices (Benchmarking tool)

- After a revision in 2006 related to the use of this product for 3 years, Odette and AIAG could launch a project to make it homologated at the ISO level.
**MARITIME CONTAINERS STANDARDISATION**

Taking into account the globalisation of exchanges, it would be interesting to define standards related to containers for CKD activity to optimise the maritime containers used on overseas flows.

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**KPI FOR GMML TRAINING**

It will be necessary to adjust the Odette LKPI training in order to put it on line with the Key Performance Indicators for Global Materials Management and Logistics recommendation.

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**INDUSTRIAL CALENDAR**

At the international level, there are 2 methods to define the industrial calendars (including 1 ISO standard). According to the chosen reference, one week can belong to two different months (example: in 2007, the litigious months will be January, February and October for week 5, 9 and 44 (3 days for the previous month, but Thursday belongs to the next month). Beyond the ISO standard, a common AIAG/Odette/GALIA recommendation would allow establishing a single industrial calendar.

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**GLOBAL RECOMMENDATION ON CONTAINER MANAGEMENT**

On the basis of the European recommendation, this project must define a standard on Returnable Container Management at the global level.

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**LOGISTICS TRAINING**

**LKPI TRAINING (LOGISTICS PERFORMANCE INDICATORS)**

2006 saw the arrival of a European Training on Logistics performance indicators complementary to Global MMOG/LE. This one-day training (in French or in English) is dedicated to the implementation of the Odette LKPI recommendation and offers a focus on the performance management in the customer-supplier relationship within the Supply chain. The first training session was organised on May 17, 2006.

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**STANDARDS USED BY CAR-MAKERS (MESSAGES, DN, LABELS)**

In order to help suppliers to better understand and to implement the GALIA/Odette recommendations used by French manufacturers within the deployment of LSP Logistic policies and CINDI project for RENAULT, and Alternative Logistic for PSA, GALIA proposed a one day training (in French or in English) on EDI Messages, labels and Delivery notes as recommended by the two carmakers. More than 80 persons have already taken part to this recent training. See the GALIA Website to know about next training dates.
**E-LEARNING ON EDI / WEB EDI**

An e-learning programme on EDI / Web EDI is available on public part of the GALIA Website.

It enables a manager, an IT specialist, a logistics manager or a member of sales staff to become more familiar with the standard tools that allow optimising or automating customer/supplier processes.

Depending on your profile, you will follow a personalised training course based on a serie of modules of approximately 20 to 30 minutes.

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**INTRODUCTION TO TECHNICAL ELECTRONIC EXCHANGES**

This training was built from the “EDI and Web EDI” e-learning module content. It comes in addition to this module and allows to the interested people to detail the various concepts presented in the e-learning module. This training is addressed to managers, logistics managers, IT specialists, or members of sales staff having to acquire the EDI concepts and to choose a solution to be implemented.

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**TECHNICAL TRAINING TO EDIFACT STANDARD**

The objective of this training is to acquire concepts on EDI and to understand the EDIFACT standard through the main messages used within the automotive industry. This rather technical training is mainly addressed to IT specialists having to implement EDI messages.

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**INTRODUCTION TO XML**

This training is addressed to all those wanting to acquire XML concepts and to understand differences between XML and EDIFACT.

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**GLOBAL MMOG/LE TRAINING**

It aims to better know the Global MMOG/LE benchmark criteria, to understand the opportunities offered by this approach for company (continuous improvement) and to control internal implementation and roll out. GALIA has worked two trainings on logistics performance evaluation (one one-day training and one three-days training). More than 450 persons have already taken part to these two trainings...
Global MMOG/LE and LKPI: a complete device dedicated to logistic performance

2006 marks the third year of diffusion of Global MMOG/LE benchmark criteria. By the time, this tool was recognised as the standard for logistics performance evaluation and self-evaluation within the automotive industry. To be more precise, it measures especially their capability to implement a high-performance logistics by comparing their organisation in place with the best practices.

Today, we note that the tool is mature. It is promoted by the international associations which have designed it (Odette and AIAG), by car makers and by many parts suppliers. It is now widely used and really adopted by the companies which have decided to use it.

This increasing diffusion and the richness of the feedbacks from users decided the designers of these benchmark criteria to amend them in the summer 2006. The goal was to make the tool more convivial to use and to reinforce the robustness of the evaluation process. Like the previous one, this new version is available on the public part of the GALIA website (www.galia.com).

In parallel, the logistics domain welcomed a new recommendation intended to standardise the main indicators measuring logistics performance in “customer-supplier” relationships (LKPI recommendation: Logistics Key Performance Indicators). This recommendation is perfectly consistent with Global MMOG/LE benchmark criteria. It highlights and details the measurement of the logistics operational performance.

In order to continue the promotion of these standards, GALIA still proposes specific trainings in French and in English.

Training offer

In 2006, one-day training on LKPI joined the training offer of the GALIA Logistics domain. This training allows participants reaching to two main objectives:

1) identify the indicators that reflect the performance of their relationships with their customers or suppliers;
2) be able to calculate them and especially to implement a consistent project to put them in place within a continuous improvement approach.

This new training does compromise the existing and now traditional trainings on Global MMOG/LE. The offer is still the same regarding that recommendation. It counts a one-day training course intending to present the benchmark criteria, their use and their contribution.

It is essentially dedicated to managers. GALIA also offers a three-day course aiming to train future auditors who will work either internally to pilot self-assessments within a continuous improvement approach, or within their suppliers’ organisation, to audit them or to take part to a joint improvement approach. This last training is either carried out in an inter-firms format, generally at GALIA, or in an intra-firm format within a company wishing to train several auditors. Intra-firm sessions allow on-site practical exercises in conditions very close to a real evaluation.

In addition of these trainings dedicated to professionals, GALIA is partner of two higher establishments: la Faculté des Sciences Appliquées of Béthune and l’Ecole des Mines of Paris. GALIA and these establishments propose to students a specific course about Global MMOG/LE mixing theory, knowledge of automotive industry and a practical evaluation in a company. Companies and students work together, use the benchmark criteria and arise all convinced of its power and its contributions.

End results of trainings in 2006

Like in 2005, more than one hundred persons have followed the logistics training at GALIA in 2006.

The LKPI Training is very recent and it is too early to draw end result on it. Indeed, 2006 were especially devoted to the development of this module and to the achievement of pilot sessions in French, but also in English in order to make it approved by the Odette/AIAG working group reviewing the LKPI recommendation at the global level. Nevertheless, approximately twenty persons have already followed this training.

Concerning Global MMOG/LE, the forecasted tendencies at the end of 2005 were confirmed.

The familiarisation training keeps a stable audience, but in low profile compared to the first sessions carried out when the benchmark criteria were published.

This flat profile shows that the communication around these benchmark criteria was effective and efficient. The major work on awareness is done and it is not useful to any more explain massively to the managers what Global MMOG/LE is, nor the useful of this tool.
However, the practical training, as well inter-firms as intra-firms, continues to meet a constant success. Thanks to their customers’ request or just to implement an improvement method, many companies send representatives to be trained to make them able to manage evaluations and the management of a real continuous improvement approach dedicated to logistics. This wish to implement an effective and perpetuate standard approach is increasingly strong, showing that the simple view of this tool only focusing on evaluation is over and replaced by a constructive continuous improvement approach.

This contribution of Global MMOG/LE and its recognition as an improvement tool are illustrated by a relatively new phenomenon. Convinced by the facts and by the success of a first implementation, many companies having already trained collaborators send other ones. They thus want to reinforce their teams that carry their continuous improvement approach or to accelerate its roll-out. This confidence and the loyalty of these companies towards Global MMOG/LE is for us the best recognition of this tool effectiveness, which was designed to be practical and compliant with companies’ reality.

**Good prospects**

As a conclusion, the end results of the logistics domain trainings given in 2006 are very positive. The method chosen to promote Global MMOG/LE is now fruitly and the request for practical training is still constant, as well in inter as in intra-firms.

Of course, we should not stop our efforts and aim a deployment even more massive of these benchmark criteria. It appears as an undeniably valuable standard for the evaluation of logistics organisations.

Although recent, the addition of the LKPI recommendation to the disposal of evaluation and logistics performances control is very well perceived and constitutes an additional element which argues for an acceleration of the roll-out of effective continuous improvement approaches.

The training volume is a very good indicator of this roll-out vitality. And, in spite of the positive end results that we draw up, we can only wish further increase for next years.

Remarks in conversation with Thierry Koscieniak (Logistics Project Manager)

COMMUNICATION IN LOGISTICS

**TWO GALIA LOGISTICS MEETINGS:**

- On May 12, 2006 (105 participants): Geodis presentation of a RFID pilot in closed loop by Joël David, Expertise and Engineering Department.

**PARTICIPATION IN A RANGE OF EVENTS:**

- Traceability conference 2006 (January 2006)

A presentation has been given at the conference – “the RFID and the automotive industry”. This paper provided an opportunity to describe the work undertaken by GALIA/Odette in this area (possible use of RFID in the Logistics chain, potential benefits of RFID in the Logistics Chain, the challenges raised by RFID in the Automotive Logistics Chain, Automotive standards and recommendations associated with RFID, RFID projects currently in progress, RFID action plans in Europe and RFID activities in the United States).
Service provider Club (February 2006)
In February 24, GALIA presented its 2005 activities to the service provider club. This event offered an opportunity to focus particularly on LKPI recommendation (Logistics performance indicators) and on the “invoice” subject in order to allow solutions providers to integrate new productions.

SAP France users club (March 2006)
Presentations have been made by GALIA (Jacky Cousin, Thierry Koscielniak and Nadine Buisson-Chavot), by RENAULT (Jean-François Tahon) and by GLAVERBEL (Antoine Moglia) to the SAP France Users Club. The main objectives of this meeting were to present A.L.F.A. project, the work undertaken by GALIA in the “invoice” area, to focus particularly on Odette LKPI recommendation (Logistics performance indicators) and to indicate the logistic evolutions occurred at Renault since the implementation of “CINDI” project.

“RFID” round table in SITL show 2006 (March 2006)
GEODIS organised for its customers, by the S.I.T.L. occasion, international week of Transport and Logistics, a “RFID” round table. This round table regrouping some companies (PFIZER, STP, DECATHLON, TOTAL, GEODIS, CHANTELLE, RENAULT and CAT Group) and national organisations (GS1 for retails activities and GALIA for automotive industry), developed the topic: “Sharing of multi-sectoral experiences and RFID success conditions”.

The diary was as follows:
- RFID technology Interest based on the customer sector (traceability, facility and speed of reading, data storage, antitheft device...).
- Achieved pilots experience feedback
- Organisational means set to accomplish a solution roll-out.
- Next stages and requirements needed for RFID operational set.
- The levers which will launch in each sector the development and the extension of RFID and the time that it will take.

Electronic Business Days 2006 (April 2006)
A presentation has been given at the conference - “the Web EDI in Automotive Industry”. After a brief recall on Web EDI, this paper provided an opportunity to describe the work undertaken by GALIA /Odette in the area (An automotive solutions homologation process, an “e-learning” training tool, a GALIA A.L.F.A. project tool). This presentation of GALIA was illustrated by the testimony of Charaf Rhlalou (RENAULT EDI Manager) showing the importance of Web EDI in RENAULT 100% EDI deployment strategy.

Odette Conference - Czech Republic (June 2006)
Damien Derlot (SNOP) and Thierry Koscielniak (GALIA) provided a joint presentation of LKPI recommendation to the Odette Conference in the Czech Republic on 6 June 2006 in Brno before an audience of nearly 200 people (75% suppliers to the Czech and Slovak automotive industry). The objective of this presentation was to encourage the Global MMOG/LE benchmark criteria use in Czech Republic and in Slovakia.

“Usine Nouvelle” Congress (June 2006)
“L’USINE NOUVELLE” organised the 5th Automotive Industry Congress on 29 June 2006 at Pavillon Dauphine in Paris. At this occasion, GALIA (via Jacky Cousin) intervened in a round table on the improvement of second tier suppliers’ competitiveness. The topics approached were as follows:
- Significant changes to be seen in the automotive sector
- Consequences of these developments in Logistics field and the contribution of GALIA/Odette to achieving the goals.
- How to improve client/supplier collaboration (especially between Tier 1 and Tier 2)?
To illustrate the round table, GALIA referred to SNOP (Tier 1 supplier) and to one of its suppliers (THYSSEN IRON SERVICE). SNOP showed us the importance of standards around logistics evaluation (Global MMOG/LE and associated performance indicators) in the management of Tier 1 supplier performance. THYSSEN IRON SERVICE explained its perception on the relation it might have with first tier supplier.

■ Odette and ENX Workshop in SMMT (June 2006)

Thierry Koscielnia (GALIA) and Michel Le Méro (RENAULT) participated to a workshop in SMMT dedicated to Odette and ENX activities, on 2006 27th of June in Ryton in front of an audience of 100 attendees. The aim of this workshop was to present Odette work (Logistics, B2B...) to encourage Global MMOG/LE benchmark criteria use and to promote ENX Network use in Great Britain.

■ Odette Conference 2006 in Munich (November 2006)

GALIA contributed to organising a number of Logistics workshops “the dominant role of carriers and logistics service providers in the supply chain” with Sylvain Malservet (GEODIS) / “International Logistics” with Peter Reinhagen (GEFCO) / “Client-supplier relation evolution” with Thierry Koscielnia (GALIA) / “Presentation of the MGI COUTIER management system based on GALIA/Odette recommendations” with Maryse Lemaitre. This conference provided also the opportunity to reward SNOP for its implication in logistics activities.

■ Release of Several Press Articles

■ “USINE NOUVELLE”:
  - RFID (June 2006).
  - Equipment suppliers: become “experts” in Supply Chain (September 2006)

■ “Stratégie Logistique”:
  - Global MMOG/LE operation in partnership with the University of Béthune (March 2006)
  - Logistics Performance Indicators in automotive industry (May 2006)
  - Capacity Demand Management: Odette DCP recommendation Application (June 2006)
  - EDI in automotive industry (November 2006).
The context of the engineering domain is still very active. Globalisation is a fact. The geographical distribution of the designing teams is now considered as in “long distance”. This spots out the importance of our mission, in particular in the supply of exchange standards, from peer to peer or from customer to supplier.

The evolutions of the solutions of IT providers are at the same time a factor of progress, and of disturbances. This leads to the fact that standards are an essential factor of stability. We have been very active over the past few months on these two subjects.

The first one gave us the opportunity to have a close cooperation with our German counterparts to develop the standards concerning the change management (in the design context). For the second one, most of our Engineering board members are very active in order to obtain an identical perception of the CATIA V5 data quality.

We should keep one’s balance between medium term subjects and others for instant use. It is the pledge to obtain the commitment of industrials that we all are.

Alain BADOUX

A WORD FROM THE CHAIRMAN OF GALIA ENGINEERING COMMITTEE

Alain Badoux
Chairman

Alexandre Loire
Project Manager

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Alain BADOUX

CONTEXT OF ENGINEERING EXCHANGES IN THE AUTOMOTIVE INDUSTRY IN 2006

Today, the automotive industry is organised on a planetary scale. It is a continuous chain extending from the vehicle manufacturer to the humblest lower-tier supplier. Exchanges of information are therefore frequent and cooperation between partners must be flawless in so far as a great deal is at stake in terms of confidentiality, expertise and markets. If the industry is organised in this way, it is partly because its market has become global and disparities in labour costs, taxes and raw materials are fuelling ferocious competition.

Our industry has proved its adaptation capacity by applying two main sets of measures:

■ Reductions in design and development lead-times, involving:
  • Intensified cooperation between vehicle manufacturers and subcontractors.
  • Structured exchanges of information between them.
■ Improvements of vehicle manufacturing and distribution, involving:
  • Constant adjustment of the industrial resource on a day to day basis in response to the demand of the customer.
  • Coverage of all aspects of logistics and information processing from the initial order right up to vehicle delivery.

Everything depends therefore on the reliability, security and organisation of information transfers. It’s exactly on what GALIA is focusing in its engineering activities. The globalisation of the context urged the engineering committee and the GALIA board of directors to demand an increasing development of international relations. These relations involve two levels:

■ Reinforcement of relations with the associations representing the German industry (notably ProSTEP iVip).
■ An increased investment in the global consortium SASIG which active members are our partners from Odette Sweden, VDA (Germany), AIAG (USA) and JAMA (JAPAN), and liaison members (not having the rights to vote), ISO, JAPIA (Japanese supplier’s association), ProSTEP iVip and, of course, Odette international.

Let’s see the projects on which we collaborated respectively on a European and a global level.
The arrival on the market of the latest version of the CAD program from DASSAULT SYSTEMES has caused a great deal of thoughts among the specialists and some questioning on the design methodologies used so far. The work realised by the GALIA group follows what was done in the area of digital data quality and extends the already published recommendations (which were used as a set of technical specifications to be fulfilled by editors of CAD data quality analysis programs, or “checkers”) by looking at the specific case of CATIA version 5 as far as French car manufacturers and parts suppliers are currently receiving or preparing to receive data modelled with this software. The easiness of data exchange is really important for parts suppliers who have to work on the environments used by each of their customers.

The working group has therefore considered the problems raised by exchanges in file mode specifically for CATIA Version 5 environment. The recommendation published this year lists 100 criteria which have to be respected in order to ensure the legibility and the exploitability of data uploaded or downloaded to / from CATIA V5. This recommendation is available both in French and in English. GALIA aims to allow the foreign partners willing so to take advantage of the results of this working group. ProSTEP iVip association in Germany and Odette Sweden have already joined this recommendation. The SASIG consortium plans to make it a subject of the XMTD working group.

The recommendation was also diffused to editors of quality analysis programs so that they can integrate these criteria into their tools and to allow testing and validating of the strength of the criteria chosen by the recommendation. The results of these tests realised on a workstation, provided by VALEO and equipped of RENAULT and PSA environments, will be published in the beginning of 2007.

In return, the ProSTEP iVip association sent to the group members the recommendation drawn up in the context of the PDM User Group entitled: “Best Practices with CATIA V5 STEP mapping”. It will be examined in the context of the work which the CATIA V5 group will start and which will focus on exchanges in PDM environment. (See: the future prospects).

Digital data quality, core subject in the dialogue between manufacturers and part suppliers

GALIA: Carlos Martin you are the Manager of the Engineering Office Information Centre at the IT Direction of MGI-COUTIER. During the last GALIA meeting on the digital data processing you asked a question which hailed widely our listeners. Before reminding this question, could you tell us about your activities at the ITD of MGI-COUTIER?

C. Martin: I am responsible of the hardware and software used by Engineering Offices for the whole MGI-COUTIER Group. I am notably in charge of managing the various systems of CAD data exchange with our partners (customers and suppliers) and their associated specific tools.

GALIA: You have then asked a question concerning a problem you are facing today: How is it possible that the working group was still starting tests while PSA and RENAULT were already requiring correct results (on PQA and Q-checker - analysis tools still not available for suppliers)? Could you precise the context and your expectations?

C. Martin: as any vehicle equipment supplier, we are constantly looking forward our customer satisfaction, at the lowest costs possible to remain competitive. Thus, the rules enacted by our customers must be applied, but, when possible, by using the most cost-saving offer allowing us to satisfy their requirements within the agreed delays.

We are currently using the PQA program for CATIA V5 with RENAULT and PSA.

In the context of the new projects starting on CATIA V5, we have acquired the specific version of PQA on CATIA V5. On the RENAULT side, up to now all goes right since this version was compatible with CATIA V5 R14, but with the switch to CATIA V5
Concerning PQA, the distributor knows our deployment planning and has as mission to deliver to our partners the adequate version on time.

GALIA: Mr STEFANO, as the responsible of CATIA V5 roll-out at PSA, what can you add to what Mr Fort said for RENAULT?

M. Stefano: during 2005, while preparing CATIA V5 roll-out at PSA, a benchmark allowed us to choose the quality control tool of CATIA V5 definitions. We have decided to roll-out internally Q-Checker tool starting from June 2006.

Through this roll-out, a first version of rules as well as conventions regarding CAD/CAM exchanges has been released and is applied in PSA.

The quality control will be implemented in the exchange procedures (Exchange of technical data and access to the digital model) at the end of 2006.

In December 2005, PSA announced to its suppliers the deployment of CATIA V5 and has simultaneously put online on the B2B Portal the first version of the CATIA V5 model's exchange Convention.

PSA insists on the respect of CAD/CAM data exchange convention by its suppliers but give them the choice of means to reach it. So, no quality control tool is imposed. Those who have the tool Q-Checker will be able to download, from the end of 2006, the associated rules of PSA issued from the CAD/CAM data exchange convention.

Our suppliers are invited to consult regularly our B2B portal containing the most recent information (conventions, rules, versions, parameter setting and other information).

GALIA: Mrs Christine Fievet, you are the chairwoman of the working group “quality and exchanges in CATIA V5 environment”, what is your conclusion?

C. Fievet: the tests on data exchanges will start mid November 2006 with the participation of the French car manufacturers PSA and RENAULT and vehicle equipment suppliers which are the mainspring on the subject. I want to remind that these tests do not aim to identify the best tool for quality control, but to evaluate the quality criteria defined in the GALIA recommendation in an operational context, this means, using the standardised exchange processes at RENAULT and PSA, and to validate their implementation in the PQA and Q-Checker quality control tools. This work took place from November 5th to December 20th of 2006. The results will be discussed in a main topic in the GALIA newsletter at the beginning of 2007.

Remarks in conversation with Alexandre Loire
(Engineering Project Manager)
MANAGING MODIFICATIONS

We quote this subject as a reminder as soon as it is officially treated at the SASIG level and the GALIA group working on this subject participates to the worldwide meetings of which we will discuss here below. However, the most active participants of SASIG being GALIA, the VDA CAD-CAM AK group and Odette Sweden, it is possible that meetings of European experts will take place in margin of global working group.

COLLABORATION IN THE CONTEXT OF THE GLOBAL SASIG CONSORTIUM

SASIG XMTD: EXCHANGE AND MANAGEMENT OF TECHNICAL DATA

This working group deals with all the aspects of technical data exchange between engineering offices. This covers many subjects:

- The realisation of the processes and the exchange messages containing engineering data (ENGDAT).
- The realisation of the processes and the exchange messages of the administrative data related to partners in the context of the project between customer and supplier (ENGPART).
- The participation to the realisation of the Odette File Transfer Protocol V2.
- The participation to the work on the integration of the Joint Automotive Data Model XML in ENGDAT V3.

The XMTD working group deals with all those subjects, all described in recommendations published and downloadable on the Odette International website (www.odette.org). We present hereafter some key points on the current subjects.

a) ENGDAT

What is ENGDAT? Approximately, it is the related to the sending of a group of technical data from a transmitter (with an accurate and correct address) to a receiver (with the right characteristics). Often, due to a lack of accuracy, the data wastes time to leave and/or to arrive to the appropriate receiver. The SASIG-XMTD gives the version 3 of the ENGDAT messages which structures and makes reliable the exchange of data. The types of exchanged data are CAD, calculation, bill of materials data or any kind of document associated to them (documentation, tables, drawings, pictures...). The formats used are the native formats of CAD/CAM systems, of PDM, of calculation or the neutral formats of exchange: STEP, SET, IGES, UNISERF, VDA, and SPAC... The exchanges are structured in the SASIG XMTD recommendation into four main stages: the request, the sending and reception of the data, as well as the management of acknowledgement of receipt. All these stages are codified in ENGDAT message. On the diagram we can see the complete flows and the organisations concerned by the data exchange.

The advantage of formalizing such information exchanges is therefore to arrive to a single mechanism common to all vehicle manufacturers and their subcontractors at all levels, based on an automotive global communication standard.

This leads to major savings since:

- There is only one system for information exchange throughout the entire supply chain and therefore the return on investment is immediate.
- Productivity is improved because users need to be trained only once to exchange CAD or PDM data in an integrated manner.
- There is less delay between the availability of information for transmission and its actual reception and this contributes significantly to the reduction in cycle time given that such transmissions are automated.
- The quality of both processes and products is improved because the data is reliable and integrated and digital models arrive all at the same time and at the right destination.

To conclude, the SASIG XMTD recommendation will be used by software editors to implement all the above concepts in data exchange solutions available in a near future.
Recent works in automated technical data exchanges

**ENGDAT V3**

The increased geographical diversification of supplying sources for human resources in engineering, prototyping and tool manufacturing domains caused a considerable growth of the needs for technical data exchanges in the automotive industry.

The Engdat V3 arisen from the need noted by various world actors in this industry, among which the AIAG (Automotive Industry Action Group). They noted that only Europe had procedures and tools of formalized and traceable exchange.

From this thought was born the idea of a numerical “universal” envelope, inspired by Engdat V2, and which would be studied by the XMTD SASIG group. Engdat V3 is an XML file different from the Edifact syntax of the Version 2. It has several conformance classes:

- **CC2** is the equivalent of the Engdat V2;
- **CC3** adds the containers support, extremely useful for the exchanges between PDM;
- **CC1** formalizes a receiver’s request for data send to the transmitter. It is a request from Japan;
- **CC4** formalizes a data receipt and reading acknowledgement. It is also a Japanese request.

The roll-out of Engdat V3 was slowed down by the arrival of JADM. What was decided is to continue with current syntax and to think of a next version to converge with JADM. However, these hesitations ruined the first “rally test”.

A new “Rally Test” was officially finished on December 15th. It was mainly question of evaluating compatibility between the various service providers. NUMLOG took part in this test. Another test is planned at the beginning of 2007 in Japan, at Mitsubishi’s request. We will also take part in it, via our Japanese representative.

**OFTP2**

Having a numerical envelope considered as universal, SASIG wondered how to transport it with the data attached, and this at the best cost. The Internet idea occured immediately.

**But what about security?**

A rapid general survey allowed us to note that none of the existing protocols is equivalent to OFTP. Indeed, the complete protocol specialization ends in a network application which is easy to control in terms of Firewalls, and its capacity of recovery is very useful for the voluminous transfers. Moreover, it is an application easy to automate in the majority of the commercial packages.

The existing protocol which seems to be the closest to the need is AS2. But it lacks, at least, the two previous last characteristics. A grid of comparison between AS2 and OFTP (V1) is available at Odette. So, it was tempting to add to OFTP a security similar to AS2 one’s. Thus was born OFTP2. It is composed of:

- The encryption of the session via TLS (SSL),
- Signed acquittals (EERP)
- A native authentication
- File security based on the (RFC) CMS specification:
  - Data signature
  - Compression
  - Encryption

These security elements rely on X509V3 certificates.

**State of the art:**

- A group primarily made up of developers was constituted through the impetus given by SASIG and under the leadership of Odette.
- A first session of interoperability tests took place successully between 5 service providers.
- A second session will start at the beginning of 2007. NUMLOG will take part in it.
- An RFC is ready for official publication
- A specific port was allotted by IANA for the OFTP/SSL (the 6619).
- A guide of implementation is under development.

Remarks in conversation with Alexandre Loire (Engineering Project Manager)
Digital mock-ups are increasingly used today in engineering offices and this tool makes it possible for suppliers to be increasingly involved in the various stages of vehicle design. This means that in addition to parts in digital format, it is necessary to exchange whole assemblies in 3D format.

In order to build, visualise and manipulate a digital model providing a virtual representation of the product and its various configurations, technical data management systems are used to make it possible to save the data-tree for a product as it is designed and as it will be manufactured and maintained. The recommendation drawn up by this working group compares the various standardised approaches to the exchange of product information derived from such data management systems. On the basis of such comparisons, the recommendation proposes solutions common to all partners in the global automotive industry in the fields of assembly data exchange and production change management.

The recommendation thus enables the following:

- Identification and modelling of engineering process scenarios,
- Identification of data and specification of the relationship between data in the case of each scenario (synchronous, on line, etc),
- Development of A SINGLE comprehensive solution based on STEP and XML,
- Harmonisation of the efforts to implement and validate each solution,
- Substantial savings on the € 1.4bn such data exchanges have cost on the single North American continent.

SASIG PDQ : PRODUCT DATA QUALITY

The global automotive industry is increasingly dependent on digital product data to design and make vehicles. This means that Computer Aided Design software is extremely important. Because of this dependence, quality shortfalls in CAD data bring with them problems during the development of a new car. The most effective approach has been, for the members of SASIG consortium, to build a common set of criteria enabling the evaluation of the quality of digital modelling and to correct problems on the basis of the criteria decided by the customer. The task of the working group was to develop a comprehensive recommendation that would provide a neutral definition of quality criteria with a view on the analysis of product data quality in the following areas:

- Geometry,
- Non-geometric data (layers, etc),
- Meshing,
- Manufacture,
- Tolerances,
- Quality inspection.

The SASIG PDQV2.0 was not only used as a basis for the development of numerous product quality analysis tools, but it has also been filed with ISO, which has decided that it should be a “Publicly Available Specification”, a first step toward total certification, in order to allow all users of CAD software to benefit from it where they need to exchange designs between partners.

SASIG PDM : PRODUCT DATA MANAGEMENT

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- Substantial savings on the € 1.4bn such data exchanges have cost on the single North American continent.
Manufacturers and their suppliers modified their methodology of vehicles development and production. They organised themselves in co-development platforms (often virtual) and the manufacturing was focused on co-production. In both cases, the production change management is a critical process on which rely the quality, the delays and the costs of vehicles.

a) During the development of a vehicle, the various parts go through many evolutionary stages which often have a knock-on effect on other components. It is fundamental for a supplier to be immediately informed of any modification that has an impact on one of the products it has the job of designing. The lack of availability of this kind of information or even simply a delay in providing it can have the effect of letting a supplier continue work on outdated items, with all the ensuing consequences on costs and lead-time.

b) During the vehicle existence, the equipments go through changes, or for several reasons, a supplier can be called to replace another. In these cases, the assembly chain must involve new functional items or new components. At what moment shall we start to assemble them? Must we adapt the assembly process? What are the impacts on the supply chain? All these questions require answers

On the design part, works have been achieved by a working group which operated until 2000. The outcome of this work was formalised in a set of functional specifications and a set of technical specifications describing the process of a modification request and of the commitment between the customer and the subcontractor. On the logistics part, an analysis of the current situation will be done.

Aware of the future prospects, American, Japanese and European vehicle manufacturers and parts suppliers started working on this subject. GALIA joined the debate and is actively participating to it.

The idea is not to trouble the existent internal processes but to harmonise, during the exchange of information necessary for a change, the terminology, macro-processes and common milestones.

The communication and validation process based around the design universe are changing. We have seen in the past information exchange and validation meetings structured around:

- Physical prototypes
- CAD workstations
- Based on exchanges of CAD data (with or without metadata).
- Based on exchanges of CAD data with specialised validation tools (with or without metadata).

Now, with the arrival of digital end-to-end continuity and “web-based” resources the requirements for the visualisation are affecting an increasing number of other actors both inside and outside companies. A few examples: buyers need to look at the 2D and 3D data on their PC, validation meetings take place increasingly frequently through “webconference” sessions; toolmakers need to have the data from the CAD files as soon as possible to make their tools or conduct process simulation sessions; garages use the data from CAD files to illustrate repair procedures and so on and so forth... Hence the creation of the concept of the “Master Document” for wide-ranging uses and reuses with the visualisation of engineering data.
FUTURE PROSPECTS

During the last engineering committee of the year, a certain number of subjects enabling easier exchanges between partners were proposed. These subjects are the following:

a) Compatibility of design methodologies with CATIA V5
b) Definition of data exchange in PDM environment
c) Cabling, digital and information data exchange from company to company (STEP AP 212…)
d) Management of ECAD/MCAD integration
e) Requirements management (STEP AP 233)
f) Validation of ECM works with electric, digital and information data
g) Long term archiving
h) Management of “3D light” files in PDM (JT, 3D pdf, …)
i) Codification of materials/substances in engineering
j) Creation of a repertory of best practice in engineering

THE ENGINEERING DOMAIN

DEPLOYING RECOMMENDATIONS IN ENGINEERING

As far as roll-out is concerned, most recommendations in the engineering domain are intended to be integrated into softwares available on the market. While not promoting any particular solution, GALIA wishes to be in a position to analyse the deployment of existing recommendations by putting appropriate indicators in place. This will make it possible to detect the possible obsolescence of certain recommendations and to assess whether an update is necessary.

Among the current lines of thought, the Engineering Committee is looking at the possibility of developing a guide and a questionnaire to optimise implementation of collaborative engineering end-to-end along the value chain (along the lines of Global Evalog) and the possibility of measuring the degree to which recommendations have been integrated into commercially available solutions. This will take a form that remains to be determined.

As a corollary to these steps, the committee wishes to open up to small and medium companies in synergy with the A.L.F.A Project, listening to their specific requirements and going to visit them locally in order to promote the recommendations and assist second and third-tier suppliers in implementing the processes recommended by their costumers.

For example, this recommendation should be able of allowing the following to be optimised:

- **Costs:**
  - By reducing the number of CAD licences, physical prototypes, modifications and by optimising work stations,
  - By eliminating the need to 2D drawings in many cases.

- **Lead-times:**
  - By providing broadly-based access to engineering data throughout the Extended Enterprise, thus facilitating collaborative work.
  - By speeding up the process whereby products are brought to market.

SASIG DEV (Digital Engineering Visualisation) group has drafted a (guideline) document setting out best practices in terms of visualisation, technologies and standards to be referred to in order to facilitate implementation of visualisation based on design data such as CAD geometry, product structure, simulation results, annotations, tolerances and tessellated data. The goal is to improve collaboration between vehicle manufacturers and parts suppliers.

Aware as they are of this context, American, Japanese and German vehicle manufacturers and parts suppliers have created a working group in SASIG where French automotive sector is not adequately represented.

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  - By eliminating the need to 2D drawings in many cases.

- **Lead-times:**
  - By providing broadly-based access to engineering data throughout the Extended Enterprise, thus facilitating collaborative work.
  - By speeding up the process whereby products are brought to market.
Each one of these subjects will be studied to determine its real interest and the benefits that automotive industry expect to make out of application. It is this study that will decide of a working group’s creation. If one of these subjects interest you, do not hesitate to contact the engineering project manager for more information and to join the group.

Before starting, a survey will be launched allowing the constitution of a documentary database which will be at least updated once a year.

COMMUNICATION IN THE ENGINEERING DOMAIN

In addition to contribution made by the Engineering domain to the GALIA newsletter, numerous communication campaigns have been conducted: the GALIA web meeting to present the work done by the “exchanges in CATIA V5 environment” working group, presentations given to MICADO, to MOBILIS 2006, during the Odette conference 2006 and participation in numerous symposia devoted to the Collaborative Engineering and PLM. In any events, it has been possible to present the state of the art in engineering at GALIA and to demonstrate the importance of the work being done in this domain.
Companies and organisations participating in the B2B working group at GALIA/Odette in the B2B domain.

AB INDUSTRIE  
AUDI  
BAMESA  
BMW  
BOSCH  
DAIMLERCHRYSLER  
DANA  
FAURECIA  
GALIA  
GLAVERBEL  
GRUPO ANTOLIN  
HONEYWELL  
HUTCHINSON  
MICHELIN  
NISSAN  
ODETTE ESPAGNE  
ODETTE INTERNATIONAL  
PLASTIC OMNIUM  
PSA PEUGEOT CITROËN  
RENAULT  
RIETER  
SIEMENS  
SKF  
SUPPLYON  
TRÈVES  
VALEO  
VDA  
WEBASTO  
WOLKSWAGEN  
ZF

FUTURE OF THE B2B COMMITTEE

A mission statement is currently being written to define Odette B2B objectives. In order to reinforce the participation in the B2BFC of other European car manufacturers, major actors in the automotive industry, as well as the truck and bus manufacturers, is planned to be requested.

The activities of the committee are now mainly based on business processes related to the exchanges between partners, so a new name, “Partnership Relationship Management Committee” (PRMC), was suggested and validated by its members.

PROJECTS COMPLETED IN 2006

PID PROJECT (PARTNER IDENTIFICATION & DATABASE)

The recommendation formalising structure and data in XML message is finished and published on the Odette Website.

The proliferation of B2B customer portals and the need for suppliers to maintain their corporate data in customers’ systems by means of those portals have pointed to the importance of the issue of customer identification and specific database terms and conditions. All B2B portals use a coding system to identify their partners and suppliers. Most vehicle manufacturers have their own internal codes. Several chose the DUNS number allocated by DUN & BRADSTREET but others use a combination of the DUNS number and their own coding system.
One of the main services available on B2B portals is the database of the Partner or the Supplier which is also used by other services available on the B2B portal. This database differs from one B2B portal to another: the structure is distinct as well as the management, the information is often the same but not equal or the representation of partners’ hierarchy is not the same.

<table>
<thead>
<tr>
<th></th>
<th>FAURECIA</th>
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</table>

The PID recommendation will comprise 3 core elements:

- A universal identifier to replace the current multiplicity of assigned customer identifiers.
- A data model which should meet the basic requirements of supplier information for most automotive customers.
- A set of XML messages which can be used by suppliers to exchange data with their customers.

The 19 digit code is based upon ISO 6523 standards; it is currently used in classic EDI. All exchanges between partners (OEM, parts suppliers and second-tier suppliers) can be based on this unique identity code.

The last PID project group meeting was held on the 1st of June 2006. It led to a common agreement on the recommendation which has since been issued. The B2BFC validated the PID recommendation which is now published on the Odette Website.

S2R stands for “Security and Reduction of Risks”. The project was conducted within the framework of the “Odette International” association. The primary objective was to offer the various actors in the automotive industry recommendations and standards on the use and management of B2B portals with a view to optimise security and exchanges.

The project was initiated by Odette International in response to demand from first-tier suppliers. Most customers have built widely differing B2B portals in the belief that they are absolutely self-sufficient where the security aspect was concerned. We can see that some first-tier suppliers have succeeded in some cases in putting in place procedures for the management of B2B portals, but as the information cascades down the supply chain, we observe that the security surrounding the information exchange drops off. The resources to be applied in the context of users access conditions for each customer portal are not uniform and are difficult to satisfy. Harmonisation and standardisation of roles and responsibilities can only help ensure that implementation is under greater control and is more secure.

The objectives of this project were:

- To provide a recommendation for actors in automotive industry in order to secure their external exchanges of information with the various partners.
- To develop a SINGLE and STANDARD security process in order to encourage proper application of the procedures involved.

And to arrive at this, four needs were identified:

1) To define the actors, their role and responsibilities on B2B portals;
2) To define a security policy for the tools used to access such portals (software for virus protection, intruder detection, etc.);
3) To define levels of security for the various methods of access;
4) To define a policy for storage and control of the information exchanged.

The companies participating directly in the project with the national organisations were: BOSCH, VALEO, BMW, SKF, WEBASTO, ZF, PSA PEUGEOT CITROËN, RENAULT and VOLKSWAGEN.

This recommendation is published on the Odette website.
**UAM PROJECT (USER & ACCESS MANAGEMENT)**

The underlying principle of the UAM recommendation is to create standardised messages enabling automated transfer of user data without obliging them to type in once again the information concerned. This means that it will be necessary to sign in only once to access partner portals. A reminder of the project’s target: UAM helps in ensuring that the benefits raised thanks to improvements made in e-business processes are not cancelled out by an increase in “administrative waste”.

The recommendation was revised in 2006 following work done on the pilot between BMW and ZF - the revised version was adapted to enable better progress of the project.

- Efficiency is enhanced by 30 to 60% through avoidance of the need to type in data manually and by making data transfer automatic.
- Data accuracy is enhanced through avoidance of error due to manual entry of user data.
- Data updating is enhanced through simplified/automated data update cycles and the possibility of backend system integration.

The recommendation is published on the Odette website.

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**CURRENT PROJECTS**

**NPMI PROJECT (NON PRODUCTION MATERIALS IDENTIFICATION)**

NPMI Project aims to standardise parts referential, their classification and their description. This standard is intended to facilitate the search of parts and the creation of an e-catalogue, in order to have the same understanding.

The launching of an Odette working group has been recently validated; today the project has the support of PSA, RENAULT, VW AUDI, DAIMLERCHRYSLER, BASF, HUTCHINSON, SIEMENS VDO, ZF, COMAU, SCHNEIDER ELECTRIC, CABLERIES SAB, LEGRIS INDUSTRIES and PCI.

Gérard Chaumond, from RENAULT, is the NPMI project leader.

The main objective of the project is to recommend a standard for the identification of industrial supply which will be committed and rolled out by suppliers and customers in the automotive industry. The standard will be based upon GALIA’s PFI recommendation and will include implementation strategies.

A second objective is to specify a standard set of XML messages which will be used to exchange standardised data.

The Odette NPMI working group was launched on September 2006 and aims to provide the recommendation within 12 months. The European project is strongly based on the PFI (Parts and Industrial Supply) recommendation made by GALIA in 2004 (the group members agreed on the use of the EAN code and the eCl@ss classification).
PROJECTS IN STUDY PHASE

All these various subjects are currently in a detailed documentation phase with regard to their precise content. Analysis is under way with the members of Odette to assess the interest and priorities for this and to determine resources from each company for these working groups.

PUG PROJECT (PORTAL USER GUIDE)

This project was created by the members of GALIA B2B committee and was proposed to Odette at the end of 2005. The main objective is to standardize the access process to shared data through the range of portals by a matrix of applications (according to function) to have an easier searching, while optimizing time saved by other projects such as UAM.

This project was initiated by GALIA in response to request from first-tier suppliers. The multiplicity of vehicle manufacturer portals (first-tier suppliers have to cope with up to 30 different portals) with differing access modes, using several languages, plus the security constraints, has created problems for first-tier firms in maintaining and communicating their information, as well as keeping abreast of technical changes. Users encounter difficulties in identification, access and using differing applications.
The guide is based on a matrix made up of company applications and Customers domains. It enables the user:

- to make a direct link between his function and the applications relevant to him,
- to obtain a descriptive text for each module.

It works in the following way: on connecting to the Customer portal, the user chooses the "guide" function. He will see displayed a matrix made up of company applications (column headings) and possible domains for Customer (line titles). A cross will indicate the domains that relate to his own speciality and if he clicks on this he will see the short description text or texts. Each such text will indicate the purpose of the application, the rules for accessing and using it, along with further links displayed in accordance with the portal's presentation.

On the basis of GALIA recommendation, the Odette B2BFC put the project in a study phase before launching a European working group. Webasto has since drafted a document to appeal German vehicle manufacturers to participate and so far, BMW has declared its interest.

TCP (TERMS & CONDITIONS IN THE USAGE OF PORTALS)

B2BFC members had an interest to launch a project dealing with the problems of diversity of terms and conditions in the usage of portals. All the T&C accesses to the portals are different and force suppliers to have one access mode for each Customer's portal. This is not efficient for suppliers. Thus, a standardisation of terms will facilitate and encourage the usage of portals.

ISC (INTEROPERABILITY OF SECURITY CERTIFICATES)

The rise of Information Technology usage in automated exchanges creates new needs in information systems (security and confidentiality) which were before communicated by mail or by fax and are nowadays exchanged by electronic messages available on Internet. This new situation brings new challenges related to the security of information technologies (encoded or encrypted data transfers, electronic signature of document, and authentication procedures of the end-users based on signature).

The projected recommendation will accelerate the roll out of new IT services where a high level of security based on certification and PKI technology is required. Law difficulties must decrease and IT interoperability will then become easier to reach. The ISC recommendation will be composed of 2 main elements:

1) A legal recommendation which will propose a restricted number of certification class (due to different ranges);
2) A technical recommendation to describe the certification process.

PORTAL AGENTS

During the Odette B2BFC committee on 2006, July and October, the “Portal Agents” subject (automatically “pump in / download” information tools) became a subject of interest and was analysed in a module at the Odette conference. What are the stakes? The interest, benefits and risks in their use. Below is the report of Xavier Desplats (Manager, Portal, Collaborative Tools and supplier Database in PSA PEUGEOT CITROËN) who participated in this module.

On the 28th and 29th of November 2006, suppliers and vehicle manufacturers were invited to the Odette Conference in order to discuss the automation of B2B portal access.

Some suppliers, facing the increasing number and diversity of manufacturers’ portals and the information they contain, contact automated solution providers which offer them automatons configured to collect targeted informations from their ERP.

Car manufacturers DAIMLER CHRYSLER, PSA PEUGEOT CITROËN and RENAULT, VISTEON and COVISINT, solution provider have exchanged about advantages/disadvantages of the implementation of automatons in the relationship between manufacturers and suppliers. Manufacturers have revealed their anxiety with regard to security and legality.

The risk in terms of security is shown by the fact that the connections to portals will be no more made by men but by machines which, if they are not well configured, can seriously deteriorate the manufacturer’s informations systems. The legal risk which was shown relies on the fact that the General Conditions of the portal’s access give the rights to men and not to machines.
Visteon has, on its side, exposed two principal advantages of the installation of these automatons: on one hand, an increased profitability of the employees and on the other hand, a more important reactivity in the answer brought to manufacturers.

The participants in this module drew the following conclusion: the automation of the access to B2B portals is time saving and offers a considerable reactivity in the relationship between manufacturers and suppliers. However, they emitted the wish that this practice should be formalized. The aim is to write General Access Conditions specific to automatons and to know the people who work behind these automatons in order to be able to manage any possible problems.
FEEDBACK ON A.L.F.A. FORUM


As highlighted by Jacky Cousin, Director of GALIA, this event was held three years after the first debates related to the assistance to bring to SME in the automotive industry. Before the launching of the pilot operation, A.L.F.A. Project went through major milestones:

- In July 2003, the members of the Executive Board of GALIA decided to assist second-tier actors by implementing ICT (Information and Communication Technology) tools using three solutions by domain (B2B, Logistics and Engineering).
- A request for financing was send to the French Ministry of Economy, Finance and Industry on 2003, the 18th of December.
- The answer was negative but GALIA was told to be in contact with regional structures as the delegations of the Ministry of finances in the regions (called DRIRE) and Regional Councils.
- Thus, GALIA approached regional structures, such as technical centers (e.g. CTN in Caen, the PÔLE NORMAND DES ECHANGES ELECTRONIQUES in Rouen, THÉSAME in Annecy ), automotive professional associations or networks (like Performance 2010, PERFOEST, PÔLE AUTOMOBILE de la Région Centre, PÔLE PRODUCTIQUE Rhône Alpes or the PÔLE D’EXCELLENCE de Champagne Ardenne) and the network of Regional Chambers for Commerce and Industry...
- Files of requests for financing were put together and agreements were obtained from everyone.
- On October 6, 2004, GALIA officially launched the first phase of A.L.F.A. Project, known as pilot operation, at the time of an event which was held during the “Paris Motor Show”.
- At that time, there were no content, tool, or methodological guide and no clearly defined organisation. Trainings did not exist either.
- During 6 to 8 months, GALIA built everything, at the same time, for regions and regional sponsors.
- In parallel, GALIA also worked out the tool for diagnosis making it possible to make effective proposals for an installation of a new ITC tool at French SME.
- Several regions were launched out in the pilot operation: Brittany - Pays de Loire, Lower and Upper Normandy, Centre, Champagne Ardennes, Franche-Comté, Rhone-Alpes.

The pilot phase arriving to its end, it was time to make its assessment to efficiently prepare the second phase of this important project: the roll out of 1000 companies at the end of 2010.
ASSESSMENT OF THE PILOT PHASE

The results of this first pilot phase are as follows:

- On the 25 started projects, the repartition of the ITC tools selected is as follows:

<table>
<thead>
<tr>
<th>Number of Companies</th>
<th>Projects Forecasted</th>
<th>Diagnostic Memorandum of Understanding</th>
<th>Projects Signed</th>
<th>Projects Started</th>
<th>Projects Complete</th>
<th>Final Assessment Meeting</th>
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<td>93</td>
<td>46</td>
<td>31</td>
<td>25</td>
<td>15</td>
</tr>
</tbody>
</table>

On the 25 started projects, the repartition of the ITC tools selected is as follows:

- First round table devoted to the assessment of the pilot operation:
  - The speakers of this first round table were selected so as to have concrete testimonies on installations ITC that were carried out, or still under implementation. They are second-tier suppliers, regional sponsors, A.L.F.A. consultants and the École des Mines in Paris.
  - Three second-tier suppliers presented their motivation for investing in an A.L.F.A. project, the selection of the ITC tool and the means necessary to implement it.

  According to Mr. Gerard Laurent, Logistics Director of SPPP, a company specialised in painting plastic parts, taking part in the pilot phase of A.L.F.A. Project allowed his company to answer to the requests of manufacturers and customers in the matter of direct deliveries.

  The aim of launching the installation of an EDI (Electronic Data Interchange) solution was to allow the very detailed management of stocks and flows of parts which most of them do not belong to their company (due to its 2nd tier position). The project is still in progress as planned in the “roadmap”, drawn up by Performance 2010, regional sponsor of the project.

  Laurent Daneyrolle, Sales Manager of EUROSANDOW, company specialised in the interior layout of vehicles with elastic holding nets or strap systems, also raised the interest of such an operation. EUROSANDOW chose an EDI tool to save time thanks to the integration of orders in the system, to improve the quality of this acquisition process and to bring a complementary commercial advantage. According to him, after ISO 9001, the ISO/TS 16949 ... EDI is a new key to open the door of new markets, provided that the customers give locks to their suppliers. The installation of the tool obviously faced ups and downs and the lack of support of their customers was the major issue.

ROUND TABLES

In complement of these figures, Patrick Verrier, Chairman of LOG & PI CONSULTING, animated two round tables. The first one aimed at collecting testimonies of actors of this pilot operation. The second aimed at measuring expectations of some actors in relation to the roll out phase.

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For Jean-François Candas of PLASTIC SOLUTIONS AUTOMOTIVE, specialist in the development of plastics parts and moulds, this pilot phase was beneficial. This group has been created after the decision of five companies to combine their skills and resources in order to provide their customers in the automotive industry with a complete service.

Consequently, the implementation of an A.L.F.A. tool such as a collaborative platform was a natural choice to allow the 8 sites to work more efficiently together. Global communication is improved as well as project management.

PLASTIC SOLUTIONS met its regional sponsor, BAOTIC and Nathalie Rebert, from Eastern Automotive Industry Network, PerfoEST.

The role of the regional sponsor was underlined by Sébastien Guenet, project manager of the Champagne Ardenne sponsor, who explained the importance, the diversity and the interest of his action. The financial aspect of his role is mainly related with the funding organisations (DRIRE and Regional Council). He is also responsible for the signature of the “tripartite” memorandum of understanding between the company manager, the A.L.F.A. consultant and the regional sponsor in charge of the follow up of the project. He was also active during the selection of the A.L.F.A. Consultants. He really appreciated his role of intermediate bond between the two structures which he retained for this project.

According to Jean-Pierre Le Bot of CELTIC CONSEIL, the first quality of an A.L.F.A. Consultant is, to be able to work as a “conductor”. He has to deal with a general manager who wishes to have a quick return on his investment without providing a lot of internal resources to support the mission of the consultant.

This is one of the reasons why Jean-Pierre Le Bot appreciated these missions. In addition to the traditional methodological approach of all ITC projects and their dedicated organisation, managing the company’s team is very important considering that the project is short.

The Ecole Nationale Supérieure des Mines in Paris is involved in the A.L.F.A. Project in a mission of research and consulting carried out by its Center of Scientific Management. It is for this reason that they were asked to share the first lessons from the pilot experiences. Eric Ballot and Frédéric Fontane, both professors and researchers, thus demonstrated the fact that the A.L.F.A. project brings a methodology which makes possible today to turn the second-tier manager’s indecision into an action. The installation of tools within a structured framework is clearly seen as a competitive advantage.

But, according to this establishment providing high level of education, this always requires a more active support on behalf of their customers.

■ Second round table devoted to the roll out of 1000 companies:

What can we expect of the second phase of the A.L.F.A. project? This is the background topic of the discussion held between several speakers among who representatives of regional structures, of the professional partners of the project, a tier 1 supplier and GALIA.

Christian Bouré, Secretary General of FIEV (Federation of Suppliers of Vehicle Industry), knows well A.L.F.A. project for contributing to its origin. Also it was particularly easy for him to highlight the importance of this project in the improvement of automotive suppliers’ performances.

Indeed, meanwhile the French Ministry of Finances launched a national survey on the digital performance of SME, the GALIA association, with all its Management Board and in partnership with FIEV, started actions aiming to deploy on the Supply Chain, and more especially towards second-tier suppliers, tools resulting from this work, in Purchasing, Collaborative Design, Logistics and, in a large point of view, Electronic exchanges between customers and suppliers (B2B). Since 2004, these actions were led in partnership with CLIFA (Automotive Supplier Connection Committee).

Antoine Moglia, EDI group Manager at GLAVERBEL, presented the role of a tier 1 supplier in the A.L.F.A. project. According to him, a tier 1 is first of all a client which role is to present the project A.L.F.A. in addition to the regional sponsor’s actions. His responsibility is also to justify to second-tier actors the need for adapting their processes and their tools to the requests of their customer. He also has to be the main adviser, from the initialization of the project, to the time of the testing phase and operational launch. He fully assumes this role and prepares, within the framework of the rolling out phase of 1000 companies, to recommend to his suppliers to use the GLAVERBEL integrated solution or any lighter and compatible system, thanks to the standards.

Tiphaine Delavallade is in charge of Material, Mechanics and Metallurgy department within the Regional Council of Brittany. For her, automotive industry has an important place in this region,
due to innovations which it brings. Clearly, there is a strong local political goodwill to support in priority performance and innovation. According to her, the A.L.F.A. project is totally in this target. It aims to support and develop the use of ICT by second-tier suppliers, and thus allows them to better fulfill the challenges of tomorrow, by co-operations with other firms. This project also complies with the need of being open to the first-tier actors. Furthermore, the project is pragmatic and its work methods and pilots projects are capitalized for the benefit of all. It is with this positive spirit that Brittany Region wishes to have a phase of rolling out which makes it possible to associate a greater number of companies.

For Nicolas Fourier, Industrial Development Division Deputy Manager at DRIRE Champagne Ardennes, the rolling out beyond the pilot phase will relate to have new companies with an objective from 1 to 1.5 and new tools for certain companies which participated in the pilot phase 1, with an objective from 2 to 4. He thinks that the pilot phase 1 was used to “prime the pump”. Even if it was longer than what was expected, the pilot operation will be useful to prepare phase 2 more effectively. The Region having much subcontracting (mechanical), the tools of engineering are less saleable. Phase 2 will concentrate especially on logistics and communication tools. He reminds us that there were no financial difficulties for public financing structures in automotive industry. Nevertheless, A.L.F.A. project investments and consultant integration can not be financially sponsored without a collaborative step. At last, Nicolas Fourier thinks that the difficulties encountered during the pilot phase can be reduced with an increased participation of the suppliers rank 1 which appeared quite unmotivated in encouraging their suppliers to improve during pilot operation.

André Hirtz is Industrial Development & competitiveness supervision Deputy Manager in the Chamber of Commerce and Industry of Strasbourg, new regional sponsor of A.L.F.A. project roll out phase 2. For him, to start this project at that moment will require to work strongly with all the well known partners: GALIA, DRIRE, Region Alsace, “Technopole” of Mulhouse, PERFOEST, BAOTIC, ACAMAS AUTOMOBILE and “l’Atelier TIC”. With these partners, he is more confident to build an active step aiming to perform in all levels: suppliers (rank 1 and 2), regional organisation in charge of financing operations. He still knows who will do what and who will help him to canvass and convince SME to integrate the Project A.L.F.A.

Alexandre Loire is in GALIA the National A.L.F.A. project Manager. So he has a natural position to conclude the debates of this round table, in giving in details what will be done to have a successful project A.L.F.A. rolling out. Among these measurements, let us quote:

- Roll out in each region of the initiative A.L.F.A. (aiming at installing a tool in 20% of the regional second-tier suppliers).
- Start new regions (Alsace and objectives are : Bourgogne, Poitou Charente and Nord Pas de Calais).
- Work with other projects from the national call for projects (TIC PME 2010) launched by the Ministry of Finance, Economy and Industry (ACAMAS, ALLIEE and S.E.I.N.E.).

### Regions actually rolling out A.L.F.A.

<table>
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<th>Regional promoters</th>
<th>Contacts</th>
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<td>Bernard Delbreil</td>
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<tr>
<td>Upper Normandy</td>
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<td>Brittany</td>
<td>Performance 2010</td>
<td>Marie-Thérèse Crozet</td>
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<td>Centre</td>
<td>Regional Chamber of Commerce and Industry of Centre</td>
<td>Denis Santeix</td>
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<tr>
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<td>Champagne-Ardennes</td>
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<td><a href="mailto:s.guenet@critt-mdts.com">s.guenet@critt-mdts.com</a></td>
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### Regions starting A.L.F.A. in 2007

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<td>Strasbourg &amp; Lower Rhine Chamber of Commerce and Industry</td>
<td>André Hirtz</td>
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JEAN-CLAUDE VINCENT’S SYNTHESIS, CHAIRMAIN OF GALIA

The testimonies on the pilot operation and the expectations for the rolling out were synthesized by Jean Claude Vincent, Chairman of GALIA, in a way to use these experiences and thus improve the global performance of A.L.F.A. project.

It is easy to see that this project is carrying hopes. Jean-Claude Vincent underlined it. He showed us the framework of what has to be done to have a successful A.L.F.A. rolling out phase.

A.L.F.A. pilot phase is in delay, that’s the reason why newly applying regions (Alsace, Bourgogne, Nord Pas de Calais...) will accelerate the involvement of new companies. Moreover, some A.L.F.A. pilot regions are still working to be more efficient.

The variety of first A.L.F.A. tools could be explained by an ignorance of some of the tools and by a lack of attractiveness of a few of them. That’s the reason why, Jean Claude Vincent suggests to reduce the number of tools in order to have only the 6 more efficient: collaborative work platform, PGI, Websites, EDI, Web EDI and Web conferencing. In addition, a common training kit and the organisation of regional forums have to be studied.

For companies interested by ITC installations, the lack of availability of internal resources, once the project is launched, can be dodged by a reinforcement of the resources at the regional sponsor and by having a more operational organisation, with for example the nomination of a project manager for the operation.

For these firms, the fact of not being able to see the advantages of such improvements could be easily avoided using a common regional marketing tool and a specific training for these regions.

The financing improvement of global investment integration (not only methodological assistance of an A.L.F.A. consultant) is to be studied with all the funding organisations and sponsors involved: DRIRE, Regional Council, ANVAR (Agency for Innovation), others ... Some financial organisations have presented the possibility to support hardware and “IT” solutions implementation investments.

A.L.F.A. and others regional projects have to work closely, as it was done with ACAMAS. On a same point of view, A.L.F.A. has to do the same with some regional competitiveness structures.

The Executive Committee of GALIA and FIEV will keep on discussing with tier 1 suppliers to convince them to join A.L.F.A. project. Several initiatives in progress make us being optimistic.

RESPONSE TO THE CALL FOR PROJECTS TIC PME 2010: THE LOGISTIC PROJECT

In order to maintain the assistance brought to SME of the automotive industry, GALIA considers the call for projects TIC PME 2010, launched in 2005 by the French Ministry of Finances, Economy and Industry, as an opportunity to accelerate and guarantee the performance of the companies in automotive industry, through the LogistTIC project which break up as follows:

- **A rewarding analysis offer** allowing quick analysis on logistics and relationships between client and suppliers. A worldwide standard for the evaluation of logistics performance is proposed for internal or external evaluation in automotive industry. Six indicators are associated to allow a standard measurement of this performance and its evolutions.

- **A ITC offer in two points:**
  - Automatic identification by Radio Frequency (RFID). This technology is specially designed for all industrial activities and is in discussion with others sectors, such as retail Industry.
  - Web EDI solutions using XML format which can be used in all industrial activities thanks to interoperability.
GALIA’S CONTRIBUTIONS TO OTHER COMPLEMENTARY PROJECTS

- Involvement in the collaborative platform included in S.E.I.N.E. project managed by GIFAS (French Aerospace industry Group): presentation of the needs in “co-design” of the automotive industry small & medium companies so that these needs are integrated in one open workplace available to these firms.

- Contribution to STRATIC, an initiative of ALLIEE project managed by FIM (Mechanics Industry Federation) and CETIM (French Industrial and Mechanical Technical Centre): development of a training kit dedicated to consultants and regional organisations engaged in ACAMAS and Project A.L.F.A. aiming to provide them with an efficient promoting presentation for firms directors to help in obtaining their involvement.

- Contribution to the TIC PME 2010 national coordination board.
“With more than 920 ENX accesses, more than 4000 individual established connections and a capacity of 400 Mbps at the end of 2006, ENX consolidates its status as European standard for the exchanges between the partners of the automotive industry (mainly between manufacturers and tier 1 suppliers), defence and administration sectors.

At the end of 2005, in order to make the use of the ENX network more easy to access and to extend it to SMEs, the certified service providers have developed much more attractive ENX offers in terms of cost and service: ADSL light (entry level offer) and SDSL coming directly to compete with the leased line connections. Therefore, we attended during the first semester 2006 a migration of the types of connections, from ENX leased line to an ENX SDSL connection, and then a roll-out of ENX entry level offers, notably for SMEs.

Today, the ENX network is established in Europe as well as in countries like Brazil, the United States or South Africa.

The need to use the ENX network outside Europe is still increasing. Several actions have been achieved in 2006 to answer this need to an extension of the global coverage of the ENX network.

During the 2nd semester of 2006, a new telecommunication company joined the ENX certification process: VERIZON BUSINESS (which bought MCI) is a North American company which wishes to offer ENX services in a near future. It targets the major groups and covers hundreds of countries.

In the context of the certification process, VERIZON BUSINESS had recently connected a company which is considered as a pilot. The ENX Association will verify and test the whole VERIZON BUSINESS ENX services in January 2007. If VERIZON BUSINESS fulfils the strict quality standard requirements established by the automotive industry, it should acquire the ENX certification in March 2007.

Therefore, VERIZON BUSINESS will be the 5th ENX certified service provider, with ORANGE BUSINESS SERVICES, T-SYSTEMS, BT INFONET and TELEFONICA. This certification of a new service provider will contribute to improve the ENX network coverage and will allow maintaining the competition among the ENX certified service providers by extending the offered service range.

On 28 November 2006 during the Odette Conference, we have presented with RENAULT the first SSL Internet/ENX hub. This new type of ENX access is designed for a use in far away emerging countries where ENX traditional accesses are expensive, as well as for VSE.

This project is the result of two workshops on the future strategic development of ENX which we had with the ENX board members (manufacturers, suppliers and vehicle associations) in September and December 2006. This connection via SSL Internet/ENX hub is not yet certified by the ENX Association; it is in a pilot phase and will be evaluated in the first semester of 2007. This service will constitute a new step forward in the accomplishment of the global connectivity need required by our activity.

Among the actions led in 2006, we would like to highlight that the ENX Association signed an agreement protocol with ACAROM, the counterpart of GALIA in Romania, in order to be in a closer relationship with romanian companies and to support them.

If you want to be informed in real time on all ENX actions, to exchange and share your point of view, or even to influence the ENX actions, don’t hesitate to join the ENX Users group which is held four times a year at GALIA.

Lennart Oly
Managing Director, ENX
**Interview of Lennart Oly**

**GALIA:** Please tell us, what ENX stands for.

**LO:** ENX is the abbreviation for “European Network Exchange” and it stands for the ENX Association as well as for the ENX-network. Our network is a standardised communications network for the European automotive industry as well as other sectors and it is mainly used for the exchange of development, production, and logistics data in between companies.

**GALIA:** And the ENX Association...

**LO:** ... is the “organisational roof”. It supervises the service quality of the providers and runs the central functions of the ENX network, especially regarding the security standards. The ENX Association was founded in June 2000 by the European automotive manufacturers, the suppliers Bosch and Siemens as well as four national automotive associations. These founding members represent the ENX board which has to be differed from the regular user base.

The network infrastructure and the individual connections are being made available by certified service providers that are contractually bound to the requirements and specifications of our concept. They compete with each other. This concept is unique.

**GALIA:** Unique? There are similar projects running in Japan, Korea and the USA.

**LO:** Our sister networks are limited to the respective region or country. ENX is currently available in more than 60 countries, there are active connections in 21 countries. We have gained core competences in designing, building and operating international cross provider networks. This is something we are proud of.

**GALIA:** And where exactly do you see the limits to the usage of ENX?

**LO:** These borderlines in between the different branches are somewhat fuzzy. Today the automotive industry already exchanges data with governmental authorities, e.g. the federal bureau of motor vehicles and drivers in Flensburg uses ENX. But even international institutions in the banking sector use ENX successfully at this stage. We, however, should not try to supply any given customer with just about any kind of product. This is realised through the public internet since many years now.

**GALIA:** So which branches might find ENX useful and interesting then?

**LO:** The aeronautics industry, especially as being a part of the European defense industry holds a lot of chances. This area also shows close relations in between the involved parties. In 2005, we have accepted the DGA, the armament procurement agency of the French ministry of defense into the board of the ENX Association. The DGA successfully uses ENX for the cooperation with its suppliers since 2004. Healthcare also is a very complex sector and the highly sensible data creates a distinct need for IT-security. Hence there are also several starting points for the usage of ENX.

**GALIA:** Why does the industry require an own network?

**LO:** Let me come back to the automobile manufacture. Not only does our network enable the industry to research and develop new vehicles and coordinate the production process. The development of a vehicle is heavily influenced by the dense integration of the manufacturers and their suppliers. The automotive industry demands for a secure, highly available network that ensures the standardised data exchange between the manufacturers and the suppliers. And that has to be possible on an economical, European wide basis, with a global future perspective. Therefore development data has to be protected from third-party-access, the exchange of development data demands for a maximum availability.

**GALIA:** But why are – five years upon the existence of ENX - only a few hundred companies connected to the network?

**LO:** Between 2000 and 2002 the technical and organisational basic conditions were created. By the end of 2002 we have put the economy and the added value for the individual user into the center of our efforts and attention. After this tour de force ENX today is well established and accepted even by its former critics.

**GALIA:** Can you prove this?

**LO:** By the end of 2004 Ford has made the final decision favoring ENX. However, convinced of the general concept from the beginning, the decision was brought about once significant cost reductions became evident. The ENX network currently consists of 9,20+ connections establishing more than 4,000 individual tunnels. There is a permanent, satisfactory growth.

**GALIA:** But the big manufacturers and suppliers like Bosch own dozens of plants and locations. Considering this 920 connections are not exactly a lot!

**LO:** Our users, no matter if manufacturer or supplier, in most cases have one access (some have two for redundancy reasons) that is not only used by an individual location but by the corporate data centers or intranets as a whole. More than 500 enterprises use the ENX network today.

The next level of deployment is triggered by the evolving migration to electronic business processes between the bigger system suppliers and their own sub-suppliers.

The five year anniversary of the ENX Association you have mentioned is heavily influenced by the dense integration of the manufacturers and coordinate the production process. The development of a vehicle therefore is not just any given date. It marks the transition from a project to a standard that is now well established in the European automotive industry. And which we will further develop step by step.

**GALIA:** What’s the way to go in terms of the future development?

**LO:** I see further potential for improvements on the internal as well as the external side. Regarding the look to the inside I believe that we have to somehow complete our range of products and close the existing gaps. Besides we want to use the branch’s high level of publicity in order to further extend the range of use.
GALIA: Can you give us examples?
LO: We are looking forward to offering an area-wide range of products in all Europe including entry level products for small and medium sized enterprises as well as an extensive use by all the manufacturers - up to the highest possible extent.

But let me come back to the initial question. Besides the permanent development of ENX I have to mention the “outside perception”, which I am not satisfied with. ENX is not being perceived as a measure to save costs and resources in a way that can be considered as being justified.

GALIA: So you believe that your network is economically advantageous in a way that using other solutions is superfluous?
LO: The connections to our network are almost without exception based on flat rates. So you basically pay one fixed amount of money no matter how high the volume of your transferred data actually is. If, in one case, two suppliers both have an ENX connection but use their old solutions in order to exchange data instead, they definitely waste money.

GALIA: So you make the user responsible for the success of ENX?
LO: I don’t really believe in pointing the finger at anyone. Due to a lack of focus onto the economic efficiency for the individual user the ENX Association has - during the first years of its existence - contributed to the image we’re fighting at the moment. The manufacturers and suppliers by the way are the ENX Association. We are a network by the automotive industry for the automotive industry.

But every single one of us has a role and should fulfill this role as good as possible. We, the ENX Association itself, have to evaluate all that we do in a way that it has to offer a concrete benefit for the user. We are obliged to make our product as attractive as possible. And attraction primarily means: low costs, broad spectrum of possible uses.

But it is also true that only we are able to provide the basis. We therefore need attractive offers by committed vendors - this message goes to our certified service providers BT INFONET, FRANCE TELECOM T-SYSTEMS and TELEFÓNICA - as well as a strategic conversion by our customers, spearheaded by the manufacturers.

Once they offer their partners a bigger range of possible uses ENX will automatically become even more economic. That’s the reason why we cannot and don’t want to take this responsibility away from our members.

GALIA: Apart from the lower costs: how do I -as a user- benefit from you, the ENX Association?
LO: First of all every single user can rely on us in a way that we support him while using ENX. Starting from choosing the right type of access on the one hand and - in the rare case of a problem- escalating the troubleshooting process on the other. We also offer various online services and gather the users in events/meetings and discussion forums.

GALIA: But you don’t offer these services free of charge?
LO: Not free of charge but also not on top. Our complete activities are included in the monthly fees, that every single user pays to his ENX-service provider. Please be aware that the ENX Association is a non profit organisation. We are a club of users and the biggest part of the value chain stays on the service provider’s side.

GALIA: So what’s the way to go for ENX?
LO: Our strategic focus for the next five years will be the user oriented development of technical processes, the implementation within the whole automotive value chain including the retail market as well as the expansion to into other branches that show a high integration between independent companies. I have already mentioned the aerospace industry. The French army supply already uses the ENX network for the exchange of data with the defence industry.

On the technical side we are currently interested in the ongoing convergence of speech, data and video as well as the blending of TC- and IT-technologies. We are convinced that this holds a chance for the further development of ENX once the providers make use of the offered opportunities.

Remarks in conversation with Nadine Buisson-Chavot (ENX Project Manager)

1. IMPORTANT EVENTS IN 2006 AND ENX NETWORK ROLL OUT

- Certification of a new ENX service provider: VERIZON BUSINESS
  - North American origin
  - Service provider comparable to BT, which has major groups as main target
  - Coverage: hundreds of countries

- Increase of access quantity: 920 accesses (in 20 countries)
  - FORD, SEAT and TOYOTA use the ENX network.

- DSL offers roll out: ADSL (entry level) and SDSL
  - For all information on Orange Business Service’s ENX offers, please contact Sandrine Duong (Sandrine.duong@francetelecom.com), indirect sales engineer with responsibility for ENX.
Development of the applications use on ENX and notably EDI:

- More than 100 RENAULT supplier sites use EDI on ENX. RENAULT encourages those of its suppliers who already have an ENX access to send their EDI messages via this network. Some suppliers who use the ENX network for their EDI exchange in place of their Numéri line saved about 15000 € per year.

ENX workshops (September and December 2006) to study the future ENX development

- Develop the ENX international use and for a certain type of users (network of dealers) at a reduced cost: SSL Internet/ENX hub. RENAULT is doing pilots on this new type of ENX access.
- Improve the service quality (QoS) and define service classes (CoS) allowing defining priorities for flows depending on their level of importance.
- ENX is studying the possibility of implementing a collaborative work tool available via ENX network.

Other activity sectors interested in ENX

- Financial institutions: ECB (European Central Bank)
- Federal Bureau of Motor Vehicles and Drivers
- Federal Offices of Criminal Investigation.

4 ENX certified service providers (a fifth one soon) offer a single point of access to the entire European automotive industry.

In 2006 the general upward trend in ENX accesses was confirmed: 920 ENX accesses in December 2006 which corresponds to some 4000 tunnels (connections between ENX partners) and global coverage outside Europe.
2006 has been the year of growth and maturity for our ENX Users Group: Growth of the number of the connected partners which goes now beyond 200 for each of the two manufacturers PSA and RENAULT; growth also in the number of manufacturers and second-tier suppliers connected to our major equipment manufacturers; maturity of the applications access architectures which now allows using thoroughly the ENX network to transfer EDI messages, access to SAP applications of HR, accountant and quality domains, reinforcing thus for us and for our partners the practical and economical interest of the network.

This deployment proficiency allowed notably the connection of important Romanian supplier’s sites.

If the deployment progression fulfils our expectations on the European perimeter, we will have to take up the challenge of providing our new partners - located all over the world - with the same opportunities of access to our services, at a reduced cost.

A pilot project of a SSL Internet/ENX hub started this year, following a RENAULT initiative, which allows our group to be tightly associated to it. A first prototype has been introduced during the Odette conference in 2006; the industrialisation and the certification of this service are planned in 2007 to make it an entire part component of ENX connectivity offer.

2007 is therefore seen as a very important year in terms of innovation and coverage extension for ENX. The contribution of our Users Group to these achievements is necessary more than ever to ensure to these new developments an implementation and a global deployment, who respond to our industry expectations.

Michel Le Méro
RENAULT ENX Project Manager
Chairman of the ENX Users Group
The ENX Users Group meets once a year, so 4 meetings in 2006.

- **List of participants:**
  - **Manufacturers & Organisations (4)**
    - RENAULT
    - PSA
    - ENX
    - DGA
  - **Suppliers (13)**
    - HONEYWELL GARRETT
    - FAURECIA
    - RIETER
    - SIEMENS
    - FREUDENBERG
    - LEAR
    - PAULSTRA
    - MAGNETI MARELLI
    - MICHELIN
    - MGI COUTIER
    - VALEO
    - TREVES
    - PLASTIC OMNIUM

Topics addressed in the ENX Users Group:

- Feedback from the experience of connected partners and assimilation of user’s needs.
- Monitoring roll out in Europe and in the rest of the world: more than 920 accesses.
- Development of the use of new ENX applications (ENX connections used to exchange data with externalised services) and monitoring EDI deployment on ENX: more than 100 RENAULT supplier’s sites use EDI on ENX.
- Experience feedback on roll out of entry level offers and on the general use of the network.
- Monitoring of relations with the Orange Business Services national service provider.
- Action plan / Presentations Planning in 2007: the DGA is to introduce l’Espace Partenaire V2, a real collaborative workstation; VERIZON BUSINESS will present its company and its range of ENX offers when they will be certified; Visio Concept to have a feedback of experience on the use of this centre of resources where this mutualised ENX connection is installed.

### 3. FUTURE PROSPECTS

- **Continuing with deployment**
  - In the automotive industry. Connection of further manufacturers (NISSAN, OPEL, HONDA, FIAT). Development of connections between tier 1 suppliers. Connection of tier 2 suppliers notably via the A.L.F.A. project.
  - General Delegation for Armament: weapon export application is operational. Future deployment prospects in 2007: 50 to 100 partners.

- **Developing the use of ENX in other sectors of activity**
  - Aeronautics sector: AIRBUS and DASSAULT AVIATION are already connected.

- **Accelerating the international roll out of ENX notably via the SSL INTERNET/ENX hub**

- **Developing the services provided by the ENX network**
  - Improving criteria in terms of service quality (QoS)
  - Defining and implementing class of service (CoS): giving priority to flows depending on their level of importance.
  - Implementation of a collaborative working tool directly on ENX network which is able to integrate both documents management and web conference.

- **Continuation of communication and promotional programmes for the ENX network**
4. COMMUNICATION

- Organisation of an ENX workshop on the 5th of June 2007 in Lyon with various presentations:
  - ENX Association: status and future technical development prospects
  - ENX users
  - Certified service providers

- Two ENX workshops were held in Great Britain and Spain in 2006

- Updating of the “3S” ENX brochure in French, German, Spanish and English (downloadable from the ENX website).

- Participations in conferences
  - Visio Concept in the context of the A.L.F.A Franche Comté Forum on Mai 18th.
  - MIDEST on November 9th.
  - Odette Conference on 2006, the 28th and 29th of November
# Members of Galia

## Active Members

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LISTE DES MEMBRES DE GALIA

PERNAT EMILE & FILS
PEUGEOT JAPY INDUSTRIES
PLASTI 23
PLASTIC OMNII
PLASTIQUES PÖPPELMANN France
PLASCO
PLASTO
POLYONE FRANCE
PRECIFORME
PRODEMA-MOTTAZ
PROFIL’ STYLE AUTOMOBILE
PSA PEUGEOT CITROEN
RECTICEL
REHAU
RENAULT
RENCAST
RIETER AUTOMOTIVE FRANCE
ROBERT BOSCH FRANCE SAS
SA GPI - GROUPE GERGONNE
SAB
SACRED
SAG FRANCE
SCAPA FRANCE
SCHAEFFLER FRANCE
SCHENFENNER VISION SYSTEM FRANCE
SCHERDEL HERCKELBOUT-DAWSON
SCHMITTER FRANCE
SCHÖFFLER ARCA SYSTEMS
SCHRADER
SEFI
SENIOR AUTOMOTIVE
SFI
SIEMENS VDO AUTOMOTIVE
SILVATRIM
SKF FRANCE
SNOF
SOCIETE DES COLLIERS NORMA
SOCIETE PARISIENNE DE RESSORTS
SOTRA
SPICER France
STEET PLASTIQUE
STREIT MECANIQUE
TECMAPLAST
TELEFLEX AUTOMOTIVE FRANCE
TENNECO AUTOMOTIVE FRANCE
TEXTRON FASTENING SYSTEMS
THYSSENKRUPP SOFEDIT VENDOME
TI GROUP AUTOMOTIVE SYSTEMS
TRAMICO
TRELLEBORG AUTOMOTIVE FRANCE
TRESSE METALLIQUE J. FORISSIER
TREVES
TROI S FRANCE
TRW FRANCE
TUBEST FLEXIBLE SOLUTIONS
TWIN SERVICES
TWL EURODEC
TYCO ELECTRONICS
UGIMAG FRANCE SAS
VALEO MANAGEMENT SERVICES
VALLOUREC COMPOSANTS AUTOMOBILE
VALLOUREC PRECISION ETIRAGE
VERNET
VISION SYSTEMS AUTOMOTIVE SAS
WAGON AUTOMOTIVE
WEBASTO SYSTEMES CARROSSERIE
WECOSTA
WOCO DECIZE S.A.S.
ZANINI FRANCE
ZF LEMFORDER METAL FRANCE
ZF LEMFORDER TUROVER
ZF SACHS SUSPENSION FRANCE

ASSOCIATE MEMBERS A

AGC AUTOMOTIVE EUROPE
ARCELOR TUBES
ARIES MECZA
ARVIN EXHAUST
ASEC
AUTOLIV LIVBAG
BTR
CAMELIN
CARPENTER ANJOU
CISATOL
DUNLOP ROUES
FONDERIES DU POITOU ALUMINIUM
FRANCAISE DE MECANIQUE
FREUDENBERG MEILLOR SAS
GEFCO
GOBIN DAUDE
HARMAN-BECKER AUTOMOTIVE SYSTEMS
HONEYWELL MATERIAUX DE FRICTION
HPI
HUTCHINSON SNC
INDUSTRIELLE DESMARQUOY SNC
LA SOURCE COMPOSANTS MOTEURS
LAJOUS INDUSTRIES
LAMINOIRS ET ATELIERS DE JEUMONT
LE JOINT FRANCAIS
LISI AUTOMOTIVE RAPID
MB AUTOMOTIVE
METALTEMPE
MGI-COUTIER MUREAUX
MGI-COUTIER SEIM
MPAP
NADELLA
NAMEL
PAUL JOURNEE
PAULSTRA
PTB TEXTRON
PUM SSC
RENAULT ACI
SAINT JEAN COMPOSANTS MOTEURS
SBFM
SCHÖFFLER ARCA SYSTEMS SUISSE
SMAN
SNR ROULEMENTS
SOCIETE DES FORGES DE FRONCLES
SOFANOU
**LISTE DES MEMBRES DE GALIA**

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**ASSOCIATE MEMBERS B**

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For more information consult our web site