

Midterm Report

I PRO-349 Group 3.1

Partner Experience Management for Multioperator and Warehouse Billing Systems

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COMARCH
INFORMATION TECHNOLOGY





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Summary

The midterm report details the progress of IPRO-349 Group 3.1 in its task of designing a quality PRM solution for Comarch. If sections were left unchanged from the project plan they are restated and it is noted that no changes were made. There are four different sections in this report.

Section 1 discusses modified objectives, giving more detail to each item of focus and some rationale.

Section 2 delves into the results to date. This section discusses the information gathered in the first half of this project, how the results lend to the objectives stated in Section 1, and gives tables and figures showing the data produced. It also restates the task list and resource assignment.

Section 3 restates the resources available as well as an updated budget.

Section 4 of the report states the problems faced throughout the project so far. With the statement of each problem is an explanation of how it affected productivity and what was done to eliminate or reduce the problem and its effect.

Finally, any sources that were used in the creation of this document are listed in the Sources section, and further information is found in the attached appendices.

1.0 Objectives

As more research was conducted, the objectives of Group 3.1 were narrowed down and clarified. Although basic objectives remain the same, this section was revamped to reflect the addition of more specific goals.

Partner Relationship Management (PRM) involves making the business transaction between the contracting party and product provider as smooth as possible. By the end of this internship our team hopes to have a quality PRM software solution design available for Comarch.

Our group prioritized the teams' objectives as follow:

- 1) **Design an optimized PRM solution for Comarch**
 - ❖ Good enough to replace 3rd party PRM solutions for client
 - ❖ Decide if it is more feasible to expand current system, or redesign the system entirely



- 2) **Explore competitor's PRM solutions**
 - ❖ Know what is currently on the market
 - ❖ Better understand implementation of PRM
 - ❖ Understand what works and what does not

- 3) **Research PRM discussions and reports**
 - ❖ Fully understand what PRM is and does
 - ❖ Learn about new methods for PRM and explore their advantages and disadvantages
 - ❖ Understand partner interaction

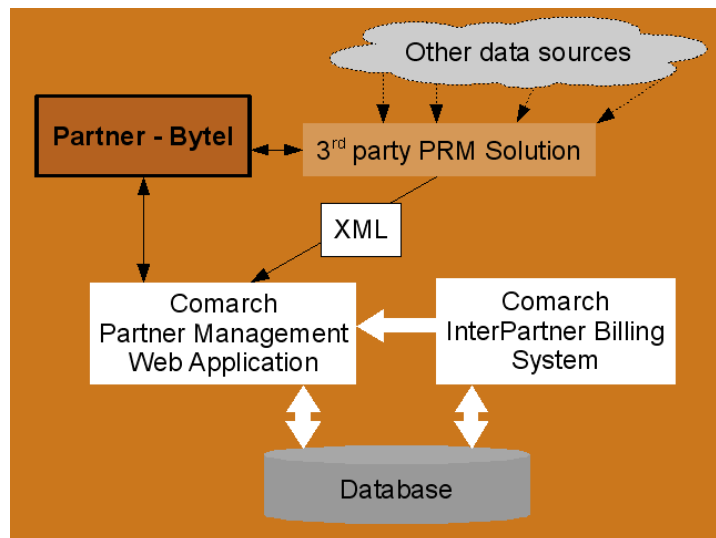


Figure 1.1: current Bytel PRM utilization

Comarch's software, *COMARCH Partner Management* and *COMARCH InterPartner Billing*, currently only has one client. Comarch's client, Bytel, is one of the biggest telecom companies in France. Bytel is currently only using Comarch's systems to manage their partner billing (Figure 1.1). It is using 3rd party software to meet its other PRM needs. The team's ultimate objective is to determine what changes need to be made in Comarch's system to create a PRM solution good enough to replace that of 3rd party software currently in place (Figure 1.2).

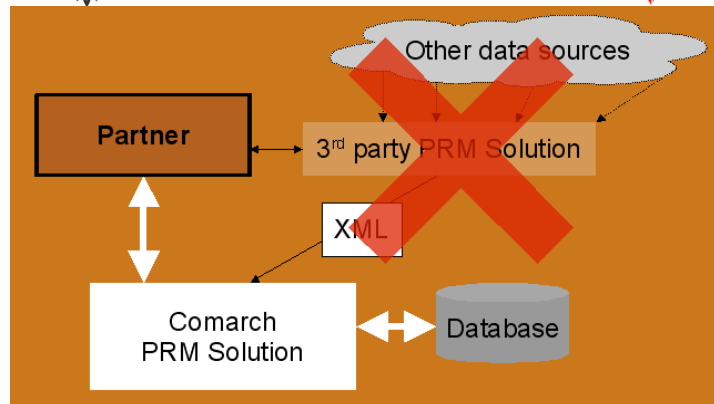


Figure 1.2: replace 3rd party

Along with that objective, Group 3.1 is to make a recommendation whether or not to simply add features to the current billing system and partner management, or to consolidate the two systems into one PRM solution, or if Comarch should completely re-do their current system in favor of an alternative system yet to be determined. In order to make that recommendation, the team must understand to the best of their abilities how PRM systems work, what methods are currently in place and what competitors are doing right or wrong. Also, the team should keep in mind the future of PRM—if there are new standards being put into place or new methods being developed.

There is a large market for PRM solutions in the telecom sector worldwide. According to the article *CCRM=PRM*, “40-60% of all IT spending flows through indirect channels.” This article was written in 2004, since then telecom companies have had to rely even more heavily on its partners for revenue flow, due to an ever expanding global market. A good PRM/CRM solution, like RightNow, sells for around \$2k USD per month for 25 users (Figure 1.3). Companies generally have a couple hundred partners. If Comarch can implement a viable PRM solution, it can tap into the growing need of telecom companies quite profitably.



NetSuite 10			RightNow CRM 7.0			Salesforce.com Winter '05 Enterprise Edition			Salesnet Extended Edition		
NetSuite, netsuite.com			RightNow Technologies, rightnow.com			Salesforce.com, salesforce.com			Salesnet, salesnet.com		
Very Good 8.1			Good 7.0			Excellent 8.7			Good 7.2		
criteria	score	weight	criteria	score	weight	criteria	score	weight	criteria	score	weight
Features	8	30%	Features	8	30%	Features	8	30%	Features	7	30%
Administration	9	15%	Administration	7	15%	Administration	9	15%	Administration	7	15%
Ease-of-use	8	15%	Ease-of-use	7	15%	Ease-of-use	8	15%	Ease-of-use	7	15%
Integration	7	15%	Integration	5	15%	Integration	10	15%	Integration	7	15%
Performance	9	15%	Performance	6	15%	Performance	9	15%	Performance	8	15%
Value	7	10%	Value	8	10%	Value	9	10%	Value	7	10%
Cost: One full and five limited user licenses, \$399 per month; additional licenses, \$99 per user, per month			Cost: Two-year license for 25 users, starts at \$50,000			Cost: \$1,500 per user, per year			Cost: \$99 per user, per month		
Platforms: Microsoft IE, Mozilla Firefox, Apple Safari			Platforms: Microsoft IE, Netscape, Apple Safari; admin requires IE 6.0; live chat requires Java browser plug-in			Platforms: Microsoft IE, Netscape; MS Outlook XP/2003			Platforms: Windows only; Microsoft IE 4 or later		
Bottom Line: Integrated ERP functionality makes this a one-stop package for SMBs. Good dashboard delivery enhances productivity, and Upsell Manager helps boost sales. But watch your monthly bill: Service thresholds and per-module pricing escalate cost.			Bottom Line: RightNow's new SFA addition is a good start, although it suffers from limited extensibility. Overall, good workflow and marketing campaign tools plus superb support features, such as self-service and integrated chat, add up to a strong showing.			Bottom Line: Without a doubt, Salesforce.com remains the undisputed champ of hosted CRM. Flexible forecasting and tools for lead conversion, good workflow and contact tools, plus unparalleled extensibility make Salesforce.com easy to recommend.			Bottom Line: This sales-only offering does well despite its lack of service and marketing tools. Process Builder eases the construction and testing of workflows. Salesnet's dashboard offer good drill-down capabilities its unlimited storage suits larger collateral libraries.		
About our Reviews and Scoring Methodology			About our Reviews and Scoring Methodology			About our Reviews and Scoring Methodology			About our Reviews and Scoring Methodology		

Figure 1.3: cost sheet for current PRM solutions (Source: *Four-way CRM shootout*)

2.0 Results to Date

Throughout the first few weeks Group 3.1 has conducted market research attempting to meet their second and third objectives—**research PRM discussions and reports**, and **explore competitor's PRM solutions**. With those goals in mind, the team divided up different topics, researched them and created visual representations of their knowledge so that it could be shared easily with team members.

One of the subjects explored was how telecom companies interact with their partners. Figure 2.1 details a possible interaction model of distribution, content, wholesale and interconnect partners. Different types of content partners, such as music, news or other types are sent to a distributor which makes it available for a service aggregator such as T-Mobile via an interconnect partner. The interconnect partner is responsible for the network connecting the partners and could charge for usage of its network. The customer interacts with a sales force, usually directly tied to the service aggregator, either in person at a store



front or over the internet at a web store. There is also a possibility that the customer could interact with a content distributor firsthand.

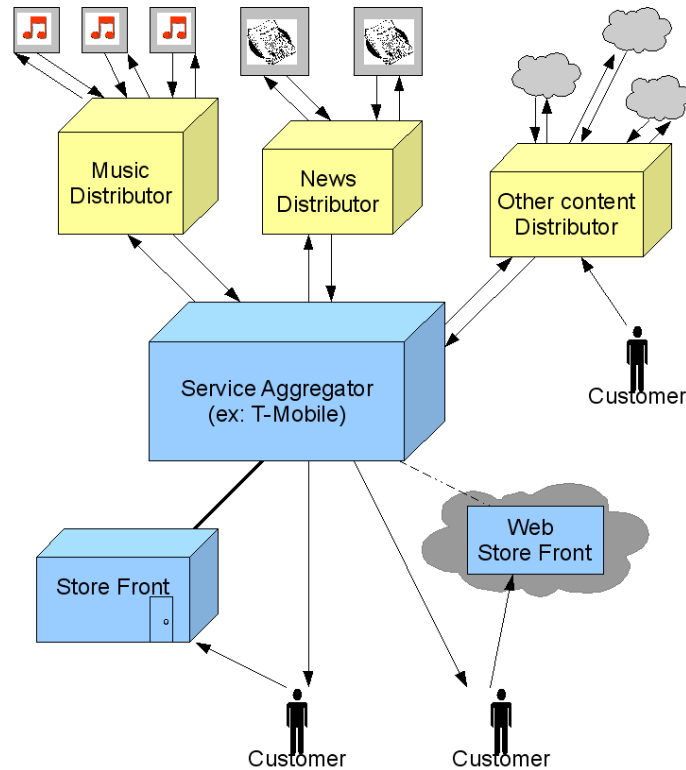


Figure 2.1: Potential Clientele Interaction Model

This model (Fig. 2.1) helped in the understanding the different levels at which partners could interface with each other or with clients. The target market of Comarch's PRM solution would be telecom companies that act mainly as service aggregators and content distributors. With this in mind we progressed into looking directly at Comarch's current system and competitor's PRM solutions.



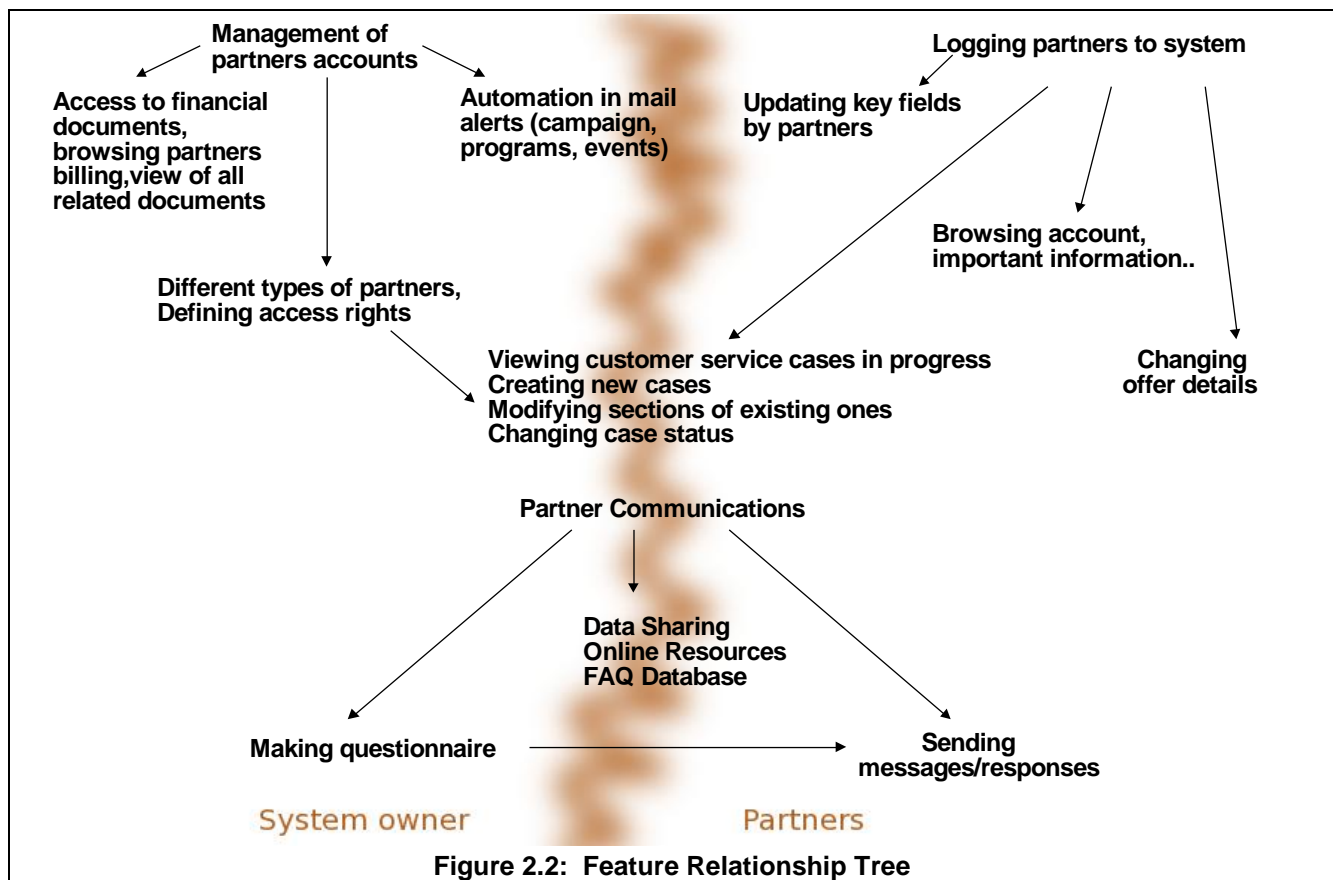
Feature Name:	Company:	Description of Feature:
Order Management	Amdocs, Formula Telcom Sol, MetaSolv, Tecordia Technologies	By identifying objectives and responsible areas for managers and employees, telecommunication companies can improve margins through better utilization of information, assets and resources. Better performance management leads to better prioritizing and proactive management of the business
Performance Management	Tecordia Technologies	Eliminate disconnects, create single records, empower personnel with real time information, adapt to changing requirements and new functionalities, achieve a lower cost of ownership
Fault Management	Tecordia Technologies	The Fault Management solution performs pre-display alarm filtering and reduction to help controllers focus on critical problem
Fraud Management	Daleen	Detects both known patterns and unusual fraud types in system. This solution utilizes rules-based alarms and artificial intelligence driven pattern matching to identify unusual behavior. It is highly flexible allowing operators to customize the configuration to suit their network and business requirements.
Revenue Assurance	Tecordia Technologies	Improve revenue stream integrity Increase income by determining where revenue is being lost. Then maximize your profits by eliminating revenue leakage and lowering operating costs.
Network Management	Cramer, Tecordia Technologies	Network management is responsible for supervising the performance of the network and, when necessary, controlling the flow of traffic to obtain the maximum use of network capacity.
Customer Relationship Management	Amdocs, Cerillion, Convergys, Daleen, Danet, Formula Telcom Sol, LHS, MaxBill, Portal, Protek	Customer relationship management (CRM) is a broad term that covers concepts used by companies to manage their relationships with customers, including the capture, storage and analysis of customer information There are three aspects of CRM which can each be implemented in isolation from each other: Operational CRM - automation or support of customer processes that include a company's sales or service representative Collaborative CRM - direct communication with customers that does not include a company's sales or service representative ("self service") Analytical CRM - analysis of customer data for a broad range of purposes
Circuit Inventory Management	Cramer, CSG, Formula Telcom Sol, MetaSolv, Protek	Ensure that your inventory reports agree with your bills. It's common to find circuits that you didn't know you owned or thought you had disconnected. Once complete, your circuit inventory should remain accurate because any moves, adds and changes entered into the enterprise telecom management system flow directly into the inventory database.
Service Management	Daleen, Tecordia Technologies	Managing complexity and ensuring quality of experience are two of the biggest issues facing service providers today. The solution goes beyond traditional Service Management to provide a holistic view of a service, its components, quality, and its impact on customers and the business.
Billing Services	Amdocs, Cerillion, Convergys	Designed to meet the requirements of the operator, whatever its size. Offering three integration scenarios: 1) as a pre-paid standalone API application; 2) as a dedicated platform approach through a partnership with prepaid SCP vendors; or 3) a fully integrated approach with a combined pre/post paid convergent platform. Unicom Prepaid can manage prepaid card generation and customer management through to moving clients to and from pre/post paid platforms, or to a blend of the two, along with support for multiple pre and post paid account hierarchies.
Billing Mediation	Amdocs, Cerillion, Danet, Kabira, MetaSolv, Tecordia Technologies, USHA Comm	Recording detailed records of payment for reference Usage, service and content-based billing Service level management Performance management
Service Provisioning	Cramer, Kabira, Tecordia Technologies	Service Provisioning is used for lifecycle management of services implemented in one or across different types of networks, using various types of equipment. Lifecycle management because services shall not only be activated, they shall also be possible to modify, inspect and deactivate.
Service Activation	MetaSolv, Tecordia Technologies	Service Activation allows activating complex network-based services. Dramatic reduction in administrative and support overhead. Reducing activation errors, and customer-care call volumes. Improving order turnaround time.
Application Service Provider	Tecordia Technologies	Put an end to the skyrocketing costs of IT administration, Reduced Capital Expenditure, Broad Reach, Speed, Predictability
Outsourcing	MetaSolv, Tecordia Technologies	Outsourcing is the use of external suppliers as a source of finished products, components, or services. It involves transferring or sharing management control and/or decision-making of a business function to an outside supplier, which involves a degree of two-way information exchange, coordination and trust between the outsourcer and its client.

Table 2.1: Abridged competitors' matrix (Appendix II: full matrix)



Table 2.1 describes the different features discovered in our research, what company implements them and the benefits from the implementation. Our team created a larger reference file (Appendix II) based on the compilation of competitors' sheets that Comarch provided. Using this document and an examination of Comarch's system, the team determined what features Comarch's system was lacking. This information was put into a table (Appendix I) and the features were given an initial prioritization according to our current research.

These features, found in both journals and the competitors' matrix, were reduced and broken into what the system owner needs to maintain and what the partners need to maintain. Figure 2.2 details the breakdown of responsibilities for the features and their interactions with each other.



The diagram (Figure 2.2) helps Group 3.1 to show dependencies between separate features/solutions. It is simpler to determine which of the features are necessary in creating a complete solution. The most important functions on the diagram are management of partners' accounts, logging partners to system and partner communications. Without implementing these features the system would



not be able to fully take advantage of dependant functions and the product would not be marketable.

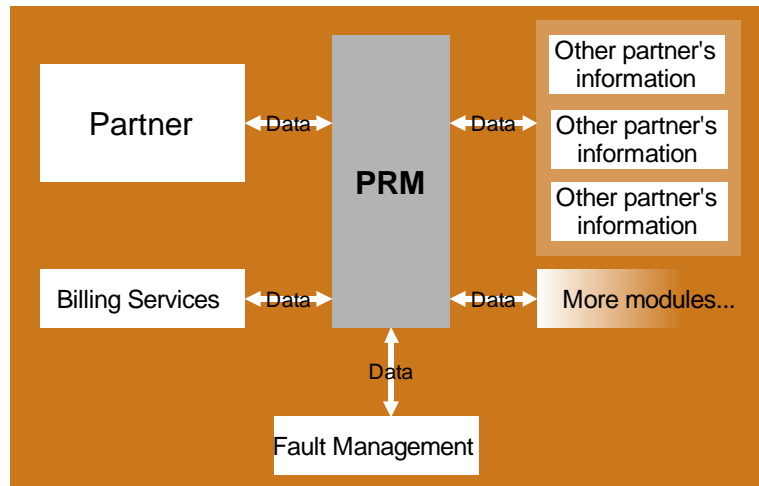


Figure 2.3: Goal PRM Solution

What the team is working towards now is detailing what an ideal PRM solution would include and how that applies towards Comarch. Figure 2.3 shows an overview of possible system interactions with a client. The PRM solution takes in information from different partners' systems and manipulates that information through different modules such as a billing service or fault management module. It then would make an information analysis and present the formatted data to the partner owning the PRM system.

The formatted data will then assist the client (Partner) by presenting what the other partners are doing, either with bills, inventory reports, consistency checks, or other information depending on which modules are being used. The client can then streamline administrative tasks and improve their business processes according to the information they receive.

The data collected allows for a better understanding of partner interactions, what is available in the market and what Comarch is lacking. Using this information, Group 3.1 will be able to better determine what features are absolutely essential for a PRM solution and present different options for Comarch to pursue. Tentatively the team has narrowed down features but further research is necessary to finalize the true importance of each feature.

The solutions Group 3.1 produces will be in the form of different PRM system implementation and details of what features should include. The research that has been conducted so far will contribute heavily into the system designs and specific functions. Comarch will be able to take this information and give it to software programmers that will ultimately put the solution into effect.



2.1 Revised Task / Event Schedule

No changes were made to the tasks/events schedule. We are currently on task.

Task Name	Time	Start	Finish	Resources*
Project plan acceptance	1 day	26 June	26 June	ALL
Collecting documentation	5 days	25 June	29 June	
Competitor's documentation	2 days	25 June	26 June	LL, AM
Extracting interesting features and functions from Comarch's user documentation and competitor's documentation.	1 day	26 June	26 June	ALL
Definitions (CRM, PRM, CE, PE, etc.)	1 day	26 June	26 June	PP, EW
List of competitors for PRM solutions	1 days	26 June	26 June	LL, AM, EW
List of functions/features with description	2 day	26 June	27 June	PP
Functional matrix (list of features and vendors)	3 days	27 June	29 June	ALL
Continuation browsing documentation	5 days	2 July	6 July	
Priorities for functions/feature.	2 days	2 July	3 July	ALL
Finalizing matrix	1 days	4 July	4 July	LL, PP
Preparing Mid-term Report	2 days	5 July	6 July	EW, ALL
Mid-term Report	1 day	6 July	6 July	
Mid-Term Review Session (L.O. Test; project update; Peer eval.)	1.25 hrs	6 July	6 July	ALL
Analysis	5 days	9 July	13 July	
How PM works (tasks, responsibilities)	2 day	9 July	10 July	PP, EW
Models of business process for PM (list w/ desc. & diagrms)	2 day	9 July	10 July	LL, AM
PM tasks vs. self care activities. What mngr. has to do vs. partners	2 day	10 July	11 July	AM
Definition of Unique Selling Points (USP) - what is or will be unique in Comarch PRM comparing to other vendors and why	2 day	12 July	12 July	LL, EW
Proposal of NEW interesting function/features for PRM	1 day	13 July	13 July	ALL
Design for GUI forms for most interesting functions (5-10 screens, that support 2-3 business processes)	5 days	16 July	20 July	PP, EW
Architecture analysis: centralized vs. distributed. Strengths and weakness for in both cases.	5 days	16 July	20 July	LL, AM
IPro Day Guidelines & Tips Session	1 day	17 July	17 July	ALL
Final Report preparation	3 days	22 July	25 July	
Exhibit/Poster	2 day	22 July	23 July	PP, EW
Abstract/Brochure	2 day	23 July	24 July	AM, EW
Presentation	1 day	24 July	24 July	LL, TBD
Collecting all documents on one CD	1 day	24 July	24 July	PP
Final Report	1 day	25 July	25 July	
Final Report with table of contents	1 day	25 July	25 July	EW, TBD
Team Work Product; Team Minutes	1 day	25 July	25 July	ALL
IPro Deliverables CD and printed table of contents	1 day	27 July	27 July	PP
IPro Projects Day Conference	3 hrs	27 July	27 July	ALL
IPro Debriefing Session (IPro Course Evaluation; Teamwork Survey)	1 hr	28 July	28 July	ALL

* Resources subject to change

ALL – Everyone

TBD – to be determined

LL – Lukasz Lukasik

AM – Adam Mucha

PP – Phil Pannenko

EW - Elizabeth Wong



3.0 Revised Project Budget

Name	Amount	Cost	Spent	
Poster	2	400		
Printing	BULK	50		
Team Functions		200	47.00	Remaining
Total:		650	47.00	603.00 zł

Forty-seven zloty were spent on a team luncheon.

3.1 Team Organization

There were no revisions in team organization, members or member assignments. The team is progressing on course and the roles assigned have proven adequate.

Name	Education	Skills
Lukasz Lukasik	4 th year Applied Computer Science Akademia Górniczo-Hutnicza Interests: Teamwork	Computer programming, web design
Adam Mucha	4 th year Applied Computer Science Akademia Górniczo-Hutnicza Interests: <i>None listed.</i>	Program creation, algorithms, web services
Philip Pannenko	4 th year Computer Science Illinois Institute of Technology Interests: Business, communication	Language, planning, presenting, computer programming, web design
Elizabeth Wong	4 th year Computer Science Illinois Institute of Technology Interests: Design	Computer programming, web design, previous IPRO experience, organization

IPRO 349 Group 3.1 does not implement sub teams or team leaders. There are multiple reasons for this decision. The size of Group 3.1 plays a factor,



as well as IPRO 349's unusual methodology—it is an internship as well as an IPRO. Because there are only four members in Group 3.1, any further division is purely arbitrary. As an internship, Group 3.1 is assigned a supervisor which provides goals and direction like a sponsor/faculty advisor in a normal IPRO would.

After each goal, provided by the supervisor, Group 3.1 discusses their understanding of the assignment and what needs to be done. Each group member then picks a task and works on it, integrating the other group members work as necessary. Group 3.1 uses a rather ad hoc approach which leaves the group adaptable to unknown future circumstances.

Again, because of the unusual nature of IPRO-349, not all standard roles were filled.

Comarch Supervisor – Stanisław Zbroja

Responsible for:

- Team assignments
- Advising group
- Information

Team Leader – Philip Pannenko

Responsible for:

- Team assignment breakdowns

Secretary – Elizabeth Wong

Responsible for:

- Organizing iGROUPS
- Finalizing IPRO deliverables
- Keeping track of minutes

4.0 Barriers and Obstacles

As with any project group of diverse individuals, Group 3.1 has had a few obstacles to overcome in order to meet its objectives. Among these obstacles are exams, hazy definitions, a busy supervisor and language barriers.

Throughout the first two weeks of the IPRO, students from Akademia Górniczo-Hutnicza (AGH) were in the midst of their final exam schedule. During this time there were a couple days in which the students of AGH (half of Group 3.1) could not attend work. This caused some delays in the transfer of information.



With half the group not in attendance it is difficult to make any significant progress. In the already shortened summer semester, and the even more reduced six week term that IPRO-349 is on, any time delay is costly. Those that were in attendance had to spend additional time explaining what the AGH students had missed.

By allocating more time to the tasks than originally anticipated and taking good meeting notes, the problem of time delay due to missing members was removed. Once the students with exams returned, the other members of the team could easily fill them in on what they missed and quickly get them up to speed.

Term definition presented itself as an obstacle as well. In the team's effort to discover what current PRM solutions were, the team had to properly define PRM. Throughout Group 3.1's search of the definition of PRM, it became increasingly clear that partner relationship management does not have a clear, detailed definition. Rather, PRM came up as more of an idea or a bingo word for monitoring or managing partner interactions.

The way in which Group 3.1 finally came up with an understanding of PRM is through research into competitors' models and meetings with their supervisor, Stanisław Zbroja. By looking into what other companies included in their PRM solution, the team could put PRM into more specific terms. A meeting in which the team presented their understandings to Zbroja helped further clarify the idea behind PRM. Zbroja helped Group 3.1's reach a common understanding and more valid conclusions.

Supervising Group 3.1 is not Stanisław Zbroja's only duty at Comarch. Because of Zbroja's other duties, communications are limited to his availability. When trying to understand exactly what the project was and what was necessary to accomplish it, the team struggled at coming up with an adequate answer. With the supervisor running his own errands, the team had to wait a while to get a reply.

In the time it took for Zbroja to respond, Group 3.1 did more research and attempted to list out questions which were pertinent to further progress. Once a meeting could be arranged, these questions helped guide the discussion and the team's understanding of the situation. The meeting became very productive and efficient. Because of the guided information flow in the meetings, it was unnecessary for the team to meet in person with Zbroja on a frequently basis. Rather, correspondences could be conducted through e-mail.

Another issue Group 3.1 faced was the language barrier. Located in southern Poland, it was reasonable to assume most people in Comarch spoke Polish. This presented a problem for the one out of the four members of the



IPRO that did not speak any Polish. It was easier for the team communications to be transacted in Polish; however, 1/3rd of the group would miss out on information if it were.

The language barrier, although an annoyance, did not cause any major problems. Although half the group were native Polish speakers and the other half were native English speakers, the Polish group members understood and spoke English as well. The team leader, Philip, a native English speaker, also understood and spoke Polish fluently. If anything was said in Polish, Philip would translate; otherwise, most transactions were conducted in English for the benefit of the non-Polish group members.

Having a busy supervisor and speaking different languages will continue to be obstacles the team will have to overcome. Although, not ideal, these are problems that cannot be solved during this program. The solutions we have tested so far, however, have proven effective in dealing with the different barriers. Because the team knows that these are issues they will have to face, they can be better prepared in dealing with them.

5.0 Sources

The following documents were used in the creation of the midterm report. Further sources for research/results are available upon request but are not included in this document.

“Four-way CRM shootout”

Borck, James R. January 7th, 2005

<http://www.infoworld.com/infoworld/article/05/01/07/02FEcrmhosted_1.html>

“CCRM=PRM”

Author Unknown. 2004.

Appendix IV