

I PRO 349 2.1 Project Plan  
June 26, 2007  
Krakow, Poland

**Map Reporting Component for  
Reports Book and CDN XL**

**ComArch Information Technology**

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Assistant Advisor: Zach Hench  
Mentor: Marcin Budny

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Katherine Hadou  
Jessica Schmit  
Przemyslaw Warzynski

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## 1.0 Objectives

IPRO 349 2.1 is focused on creating a prototype of a map reporting component that will be used as an addition to the ComArch Report Book software. The Report Book is a bundle of software used for data analysis that is not built in Excel. ComArch Report Books are used to analyze transactional data, as well as profit control data. For example, it interprets data collected from transactions at stores through the register data gathered during the day, but can also help companies analyze why profit margins are different in different regions. A chart explaining exactly what the program itself does can be found in Fig. 1.1.

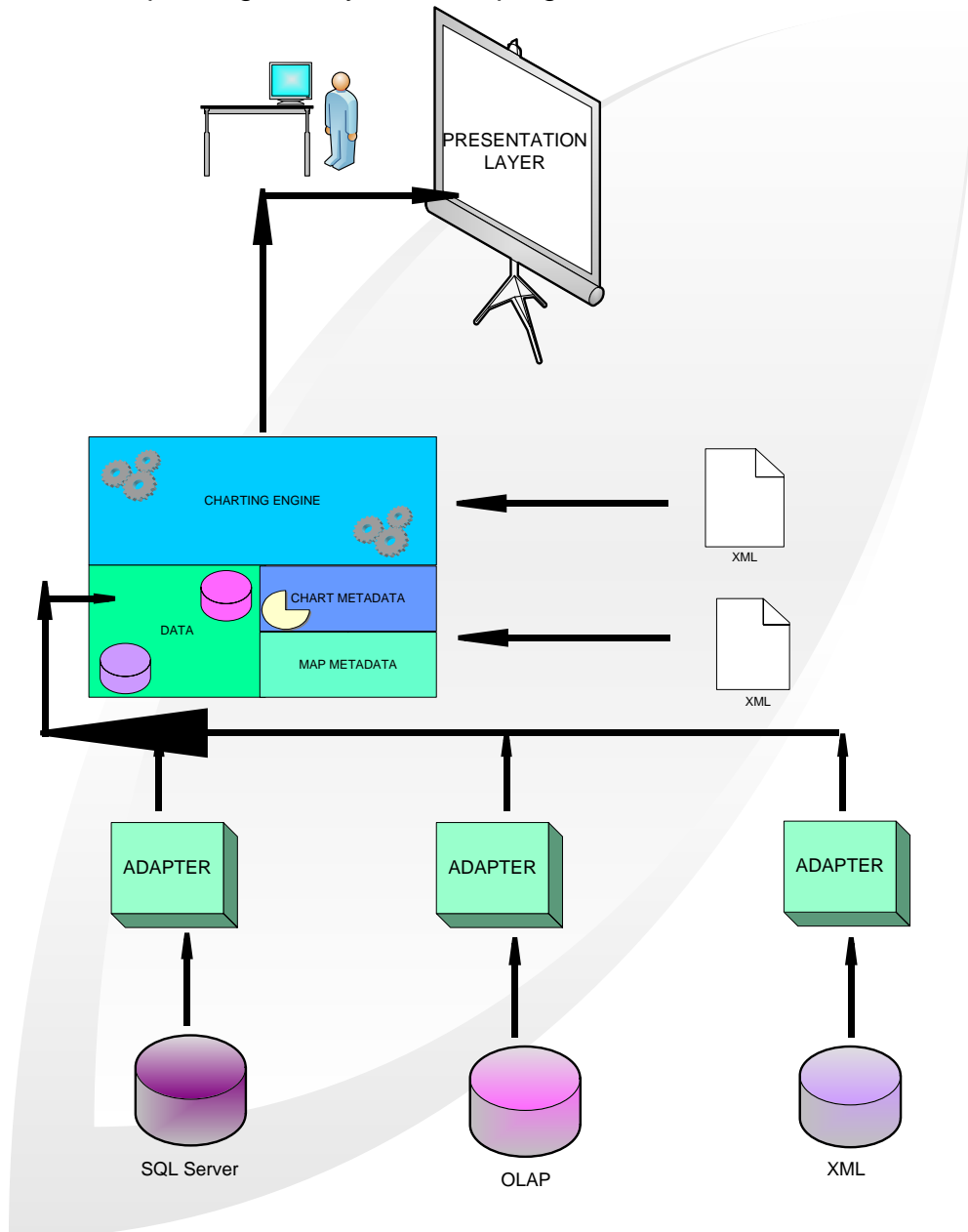
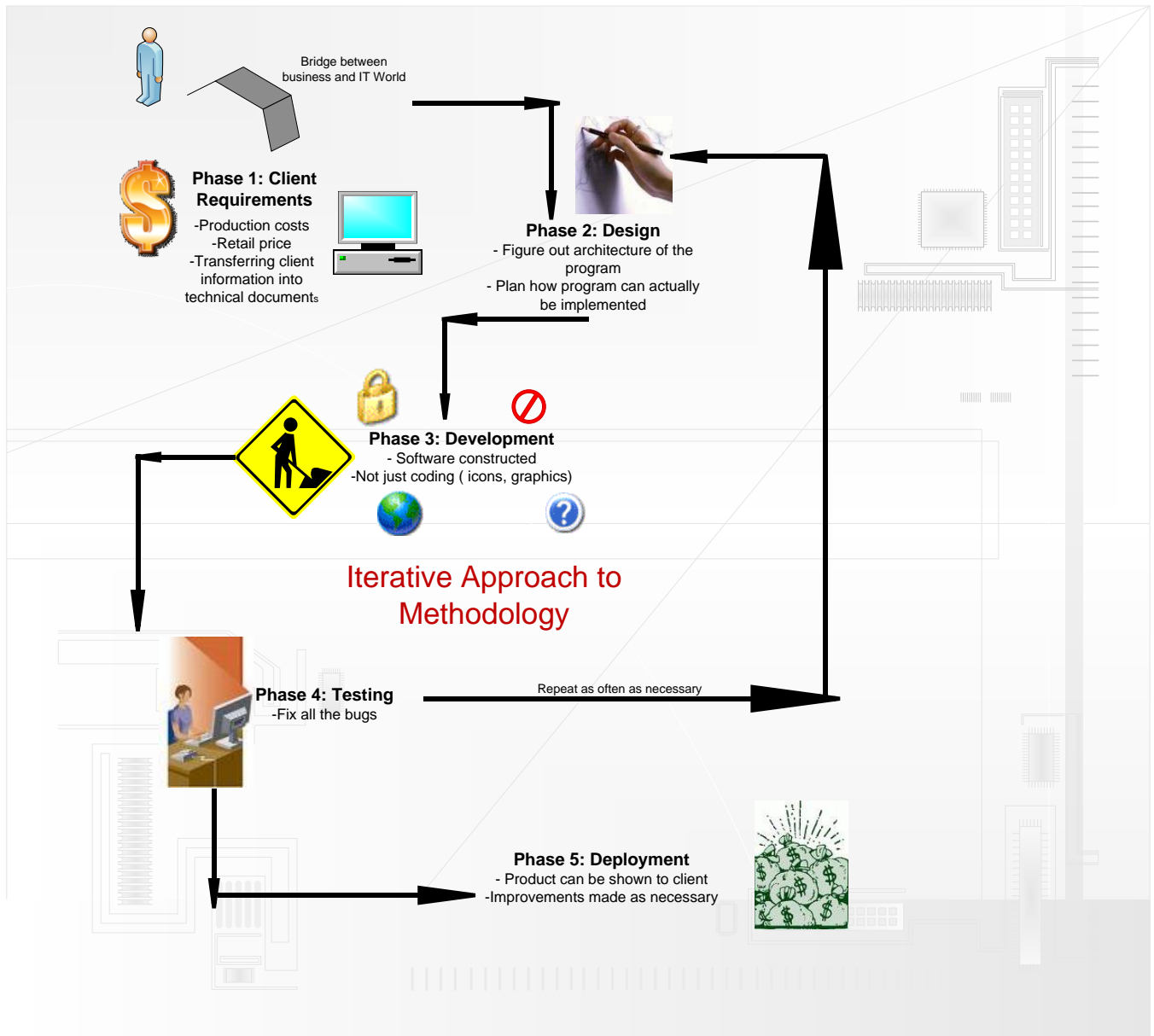


Figure 1.1 Data Conversion for Mapping Component

The map reporting component will be added to the software in order to increase the value to the client. The objectives for this group are to create this prototype and track its progress from the gathering of user requirements through the actual development of the software using IT project methodology (Fig. 1.2). The methodology shows us an ideal model where none of the phases need to be repeated. In reality, however, it is expected that design, development and testing will be repeated many times before the project is actually deployed to the consumer.



**Figure 1.2 Iterative Approach to Methodology**

## 2.0 Background

ComArch's Report Book is sold to many different types of clients. Based on ComArch's main competitor, Dundas, Report Book caters to three types of business: financially based companies, software/ hi-tech ventures, and manufactures of consumer goods. A list of some Dundas's clients are shown in the chart below.

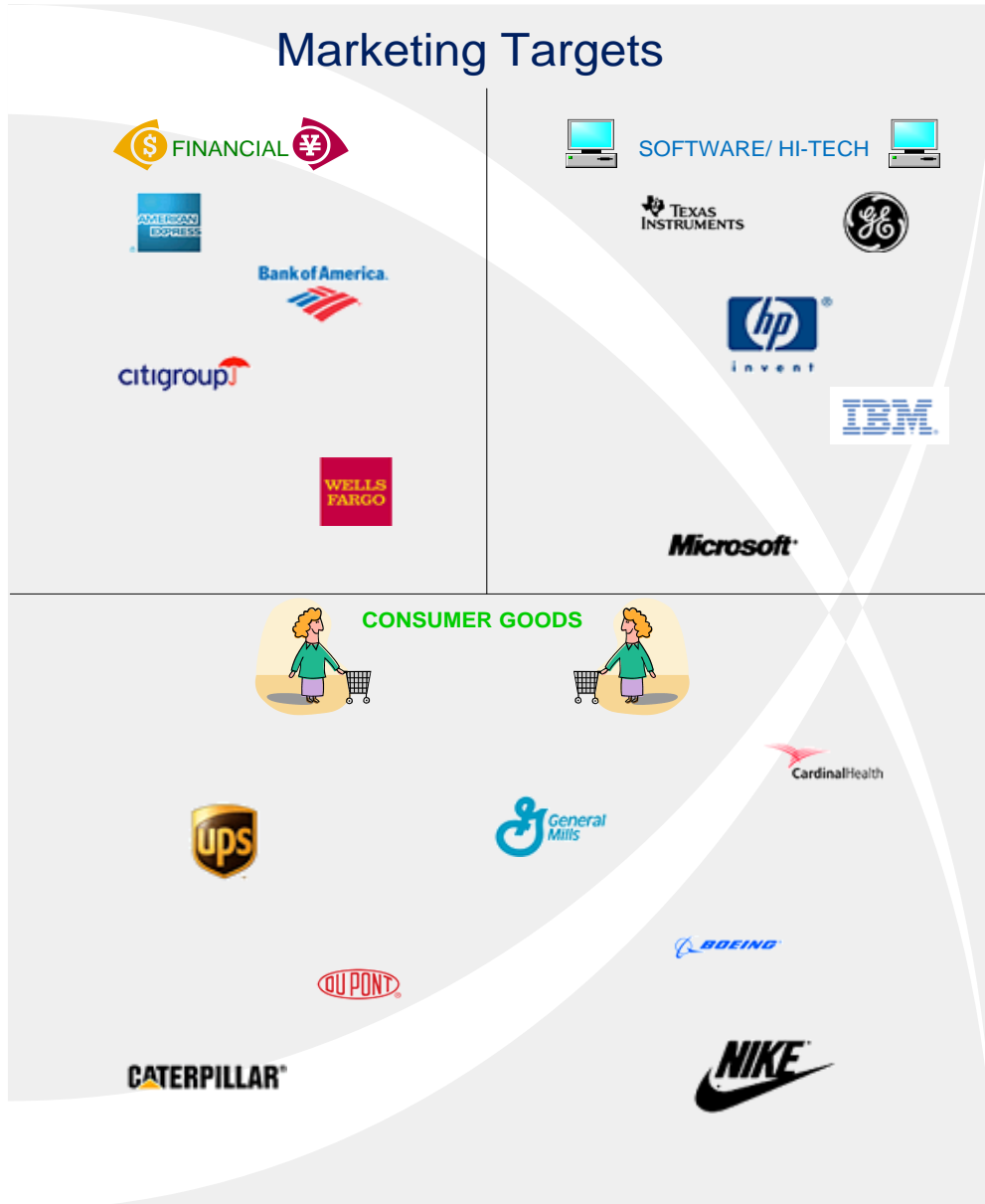


Fig. 2.1 List of Dundas Clients

Report Book generally caters to medium-sized companies, which is defined as any business with less than 500 employees. Some of Report Book's current customers are Sokołów SA and PKM Duda. However, with the added versatility that a map reporting component would offer Report Book, it would be possible to expand to large and even Fortune 500 companies, much like Dundas.

We know the client requirements that were passed down to us from our supervisor. The map reporting component will be an addition to the Report Book already in use. We are in charge of creating a program that will allow the user to display maps with pie charts, colors (as in winning candidate scenarios) and bar graphs. The data that is used to create these charts can come from the operator of the software, ranging from when the product arrives at the warehouse to when the product is literally scanned to be purchased. One of the main goals of the product is to provide a sense of versatility to the consumer, so that it can be used in many different ways. The maps must also provide for a drill down feature (Fig. 2.2). The research and documentation team did research on the mapping components of other companies and the presentation can be seen in Appendix A, and as far as we know there have been no major attempts at creating mapping components for ComArch thus far.

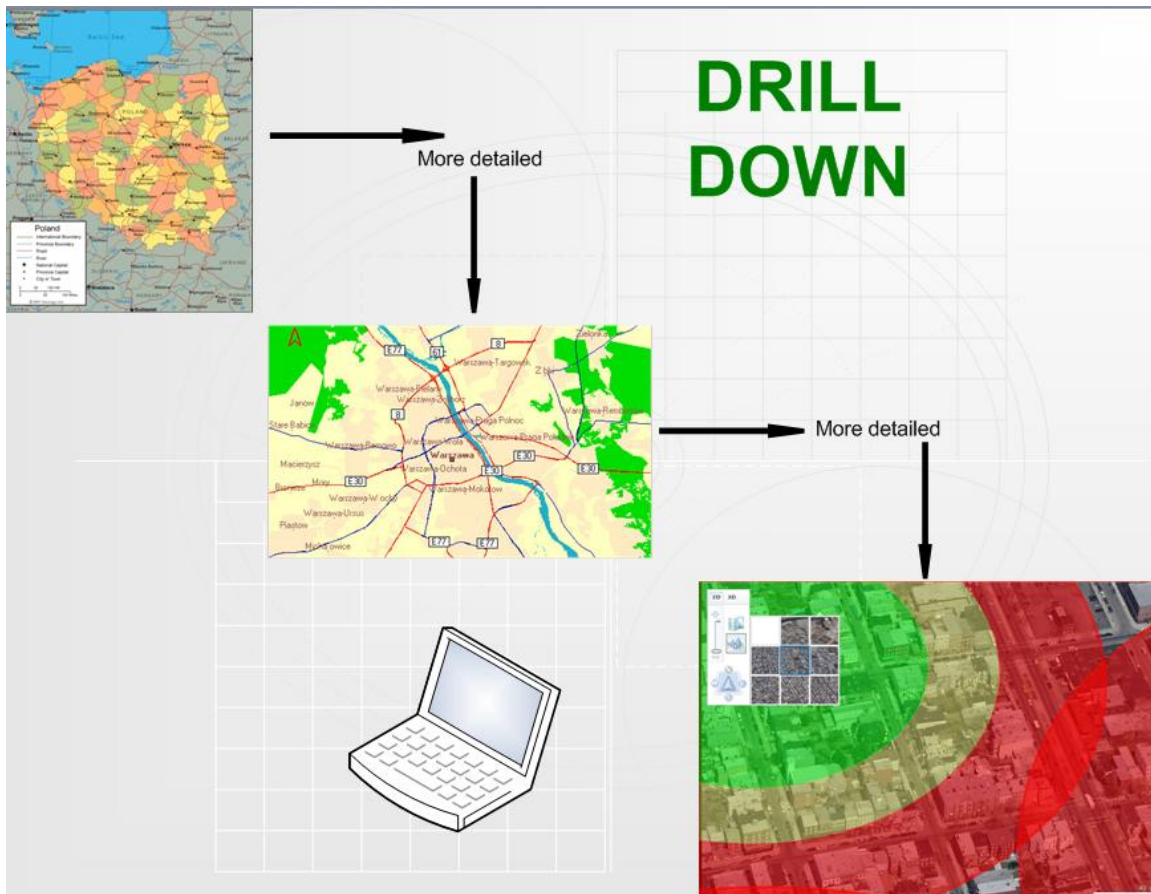
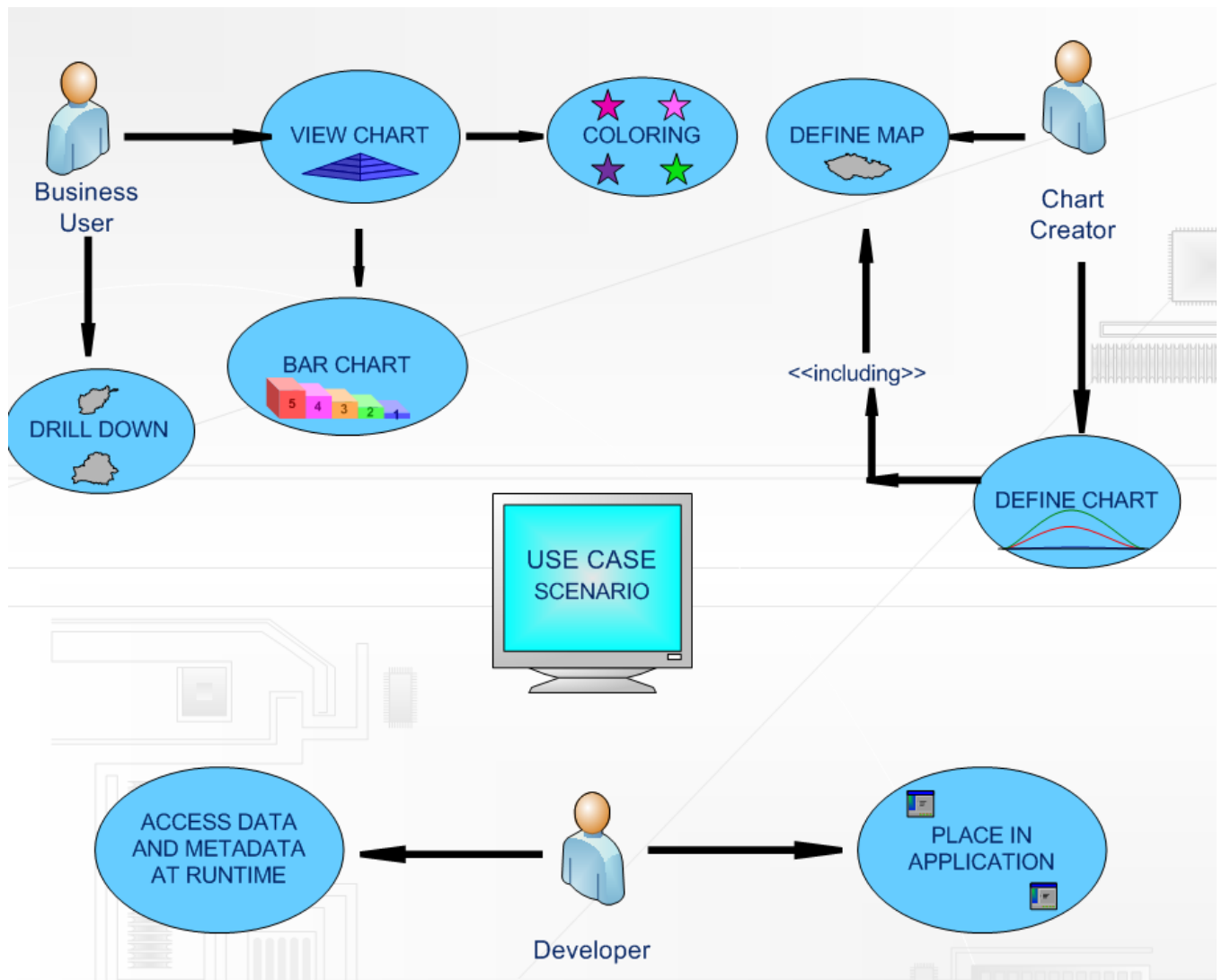


Figure 2.2 Drill Down Feature

As stated earlier, the reason for adding this component is to increase the value of the software to the client. The client will be able to analyze both transactional and control data. We will be using C# and Microsoft's .NET Framework along with Visual Studio 2005 to write the code for the actual program, as well as Visio and Inkscape to create prototype maps for the client. Figure 2.3 shows the use-case scenario showing what each participant wants from the system. The programmers were given training programs and practice programming to do for the first three days of work, while the research and documentation team were given a short tutorial on how to use Visio and Inkscape.



**Figure 2.3 Use-case Scenario**

One of the main problems facing the group is the language barrier. Although we have one IIT student who speaks fluent Polish, some technical explanations take quite a while to be understood by both subgroups. Another problem we face is that the developers have never used C# before. As a result, they have had to have a “crash course” in programming with it, but their backgrounds in Java and C++ have helped them understand and use the new programming language. Finally, we have the problem that the research and documentation team have no programming experience, and very limited graphic design experience. We have overcome that problem by asking our supervisors and colleagues for help whenever we need it and playing around with the Visio and Inkscape programs to find new tricks and features.

Our plan is to divide the work necessary for the project between the two teams. The development team will do the actual coding necessary to create the program using C#. The research and documentation team will do any research necessary to complete the project, as well as complete all of the documentation required by ComArch and IIT IPRO. The IIT IPRO documentation includes most of what is necessary for the ComArch documentation, so any additional information will be added as needed.

### **3.0 Methodology/ Brainstorm/ Work Breakdown Structure**

Currently, the ComArch Report Book has no way to geographically represent sales distribution, only non-specific bar and line charts. ComArch wants to be able to add a component to the Report Book to be able to generate Map Reporting. To develop this software, certain steps must be taken. First, what the customer wants must be understood, which has been established to be an easy and visual way to understand and predict sales outcomes. At this stage, very general planning must be crafted, such as how much ComArch is willing to spend on the development of this product and how much a consumer would be willing to pay for it. One of the first goals was to identify the advantages of ComArch’s competitors’ map reporting functions, which was researched by research and documentation team. ComArch understands that we will be unable to have a complete prototype finished in the 6 weeks we are here, so our prototype will be a simplified version of the final product.

After these capabilities have been charted out, the development team will get to work, figuring out the general outline and creating a blueprint for the program. The actual coding can then begin, as well as the construction and design of the logos and graphics the program will utilize, which will be the lengthiest phase of the project. The research and documentation will be utilizing graphic design programs, such as Inkscape and Microsoft Visio to create maps. These maps must then be broken down into smaller and more detailed versions, which is called “Drilling Down” (Fig. 2.1).

After all of this is completed, the program can be tested for possible errors. If problems arise, the program will return to the development stage to be corrected. Once the errors of the program are worked out, it will be in the final



stage of deployment, where the Map Reporting function will be able to be integrated into Report Book. This process is summarized in Figure 1.2.

Our team is only responsible for the prototype up to the development phase. Because of the wide variety of skills available within the team, given a longer time span, the entire process could be completed. However, it would be rather unreasonable to think that a wide variety of detailed maps and the actual coding for this complex function would be able to be accomplished in 6 weeks, so our supervisor has decided to guide us through the development phase.

To test the section of program created, fictional data created by Microsoft from an SQL server will be used, reporting on the financial transactions of a grocery warehouse called Northwind. Some of the products that will be tested using the map reporting component include tofu, Alice Mutton, Carnarvon Tigers, Teatime Chocolate Biscuits, Sir Rodney's Marmalade, and NuNuCa Nougat-Crème. The computer automatically can test the program utilizing the information provided by the database, and the outcome of the testing will be shared with the Documentation and Research team to be documented. The program will also be manually tested by the Documentation and Research Team by entering existing data for a specific assigned function of the program. The expected outcome of the first original copies of the program will not work as planned and will need to be further modified. However, it is expected that eventually the program reaches the ability to analyze data appropriately to display a graphically detailed map.

The research and documentation team will meet regularly with the development team to exchange information about the coding and graphic design. Using the minutes generated at these meetings, the research and documentation team will create presentations of the progress to be shared with our supervisor and the rest of the team through Word, Excel and Powerpoint documents and post them on iGROUPS to be available to the rest of the IPRO. For example, a presentation was made to discuss the pros and cons of the existing ComArch Map Reporting Components as well as those of ComArch's competitors. This type of research will be continued throughout the IPRO to ensure the cohesiveness and effectiveness of the team. IPRO deliverable documentations will be generated in the same way, with the team discussing the progress of the project, and the research and documentation team converting these records into a detailed, yet concise report. The research and conversion of all the technical data to text files will be documented by the research and design team using a combination of Word and Excel.

#### 4.0 Expected Results

The expected result is the development of the Map Reporting component that can be tested and eventually added to the Report Book function to visually allow users to view sales through maps. Chunks of the program will be developed slowly, and as each individual function becomes written, a test will be performed, utilizing the Microsoft Northwind data, to insure the functionality of the program.

A working prototype will be developed within the IPRO, utilizing a sample map of Poland. Although this will not be able to be directly implemented into the Report Book program, this will be able to be further developed and tested in to the fully working, much more complex function that can be added into Report Book. Full documentation of the process will also be completed during the IPRO.

#### 5.0 Schedule of Tasks/Milestone Events

<b>Task</b>	<b>Assigned To</b>	<b>Due By</b>
Meetings	Marcin Budny	Throughout
Programming Prototype	Development Team	Throughout
Project Plan	Research and Documentation Team	June 26, 2007
Midterm Report	Research and Documentation Team	July 6, 2007
Exhibit/Poster	Research and Documentation Team	July 23, 2007
Abstract/Brochure	Research and Documentation Team	July 24, 2007
Presentation	Research and Documentation Team And Development Team	July 24, 2007
Final Report	Research and Documentation Team	July 25, 2007
Meeting Minutes	Research and Documentation Team	July 25, 2007
CD of Deliverables	Research and Documentation Team And Development Team	July 27, 2007
IPRO Day	2 presenters (1 AGH, 1 IIT), TBD	July 27, 2007

## 6.0 Team Members and Assignments

Name	School	Major	Sub-Team	Skill Set
Krzysztof Drzyzdzyk	AGH	Applied Computer Science	Development	English, Microsoft fluency, typing skills, C++, C, Java, ADA
Katherine Hadou	IIT	Biology Biochemistry and Premed Focus Music Minor	Research and Documentation	Typing and research skills, Microsoft fluency, Polish fluency, communication skills, IPRO experience, helps parents run small business
Jessica Schmit	IIT	Biology Psychology Premed Focus	Research and Documentation	Typing skills, Dreamweaver, 3DMax, Microsoft fluency
Przemyslaw Warzynski	AGH	Computer Science	Development	English, Java, Eiffel, C++, Microsoft fluency, some graphic design experience, typing skills

**Fig. 6.1 Team Member Information**

Team Leader/Mentor: Marcin Budny

Because our sub-teams have only two members each, we decided that sub-team leaders would be unnecessary. The research and documentation team is in charge of doing any research required for this project, such as what ComArch already has in place regarding mapping components and what other companies have in place. They will also be in charge of all documentation that IPRO and ComArch require for the team. Finally, the research and documentation team will create a sample map using Visio and Inkscape. The development team will use C# and create the actual prototype mapping component.

## **7.0 Designation of Roles**

Marcin Budny gives the team an agenda before each meeting, during meetings Katherine Hadou will take minutes, and Jessica Schmit will transcribe the notes and compile them. Marcin Budny is in charge of keeping the meetings on-track and on-time. Because of the work environment provided by ComArch and because everyone is expected to contribute the same hours (9:00-17:00 Monday through Friday), no timesheets are needed. A master contact sheet has been made for the entirety of IPRO 349 by Zach Hensch; no master schedule is needed due to the proximity of all members' living spaces and the common work hours. Jessica Schmit and Katherine Hadou are in charge of posting group deliverables to iKnow and iGroups.

## Appendix A

**See demo**  
TwiLight on-line demo

**Overview**

- Home
- CRM
- Network Management
- Workflow
- Accounting & Billing
- Partner Management
- Reporting Engine

**Contact us**

@ twilight@comarch.com  
☎ +1 800 786 4408

### TWILIGHT - Communications Provider Toolkit

**A complete compact solution**

TwiLight is a complete OSS/BSS toolkit for small and mid size communications service providers and startups, including fiber and wireless broadband (ISPs and WISPs) and VoIP providers.

TwiLight takes full advantage of huge domain knowledge of Comarch accumulated over years of providing enterprise grade OSS/BSS/CRM software solutions for voice and data carriers worldwide.

TwiLight is a compact solution consisting of several components supporting all areas of provider operations. Each of the components introduces an intuitive interface and underlying information store that is fully integrated and highly intuitive:

- **Customer Relationship Management**
  - Subscriber, Lead, and Contract Database
  - Service Ordering
  - Financials
  - Problem Reporting
  - Customer Self Care Portal
- **Network Management**
  - Active Network Map
  - Network Inventory
  - Health/Performance Monitoring and Alarms
  - Customer Bandwidth Management
- **Workflow**
  - Network Maintenance & Repairs
  - Customer-site Installation Scheduling

**Headquarters:** Krakow, Poland

### **Faults:**

Not eye-catching

Organized

Not quite enough information

Somewhat confusing for small business owners without computer gurus on staff

Ambiguous descriptions

No specific section for map reporting component

No price range

DOES NOT SHOW UP ON GOOGLE SEARCH!

### **Features:**

AMAZING DEMO

Automatic SNMP topology discovery

Logical network map, with the visualization of network equipment status

Geographical base system coverage map

Integrated state and performance information

Map is more detailed, animated

Device inventory performance monitoring

Including trends and thresholds

Network related tasks scheduling and monitoring

Real view map, coordinate plane

More offered than with any other company

**GeoBrush**  
With us One Picture is worth more than a Thousand Words

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**Easy Chart 3D GEO**  
With Easy Chart reporting software you can visualize business data and create reports for business meetings, presentations and analysis sessions. Data is displayed based on geographical regions. On the top of every region can be Pie Chart, Bar Chart or Cylinder Chart.

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\$199  
[purchase](#)

**Top reasons why use Easy Chart 3D GEO:**

- Functionality - simply create images, smartCharts or movies that contain geographical regions with pie charts, bar charts or cylinder charts
- User friendliness - straightforward wizard helps user
- Simple installation - in a minute without administrator privileges
- all maps included - America, Europe, Australia, USA, EU, USA states, United Kingdom (UK), France, Spain, Germany, Austria, Italy and other.
- Custom maps - we create custom maps of industrial complexes, manufacturing plants, company complexes and schools

**Easy Chart 3D GEO reporting software**  
With *Easy Chart* software anybody can visualize business data and create reports in a minutes. Graphical reports simplify communication and emphasize important information. Supports Pie Chart, Bar Chart and Cylinder Chart shapes.

[buy Easy Chart](#)  
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**Samples**

**Map of Germany with post areas**  
Map of Germany with diagrams above every postarea (automatic colorization), [Germany detailed view](#)

**Map of United Kingdom**  
Map of United Kingdom and West Midlands area highlighted (automatic colorization)  
[UK detailed view](#)

## Faults:

Simplistic

Versatility is questionable

24-hour support only through email

No packages

## Features:

CHEAP - \$199

Chart options for map, wide-range resolution support, custom background

VERY user-friendly, colorful, catchy

Today's Tip of the Day from Dr. Presentation

Minimal effort, no installation needed (smartCh@rt technology),

cut and paste from Excel

Direct support for Oracle, Microsoft SQL, MS Access (MDB) and

ODBC database loading

Supports JPEG, TIFF, PNG, BMP, WMF and GIF image formats

AVI movie format

Language options, map options

Free, unlimited, 24-hour support

Zip-compression of charts

Direct email attachment

Home page includes:

Buy Now link, Guide link

Key features

Top reasons to buy

Examples, tips

**SoftwareFX** Your Information In Focus.

.NET Products **COM** **JAVA** **IT|SQL** Downloads Order Support Corporate Search SoftwareFX.com Go

# Extensions Pack

**Quicklinks**

- Overview
- Financial
- OLAP
- Statistical
- Maps
- Licensing
- Pricing
- Support
- Download Trial
- Purchase
- Chart Gallery

**Chart FX Maps**



Chart FX Maps provides a full library of dynamic maps that you can integrate with Chart FX to display data graphically through objects in a map. Chart FX Maps, a .NET control, not only offers a comprehensive svg maps library, but it also allows the developer to add their own custom maps through the universal SVG standard.

**Powerful Mapping Features**

- [Value Range Coloring](#)
- [Winning Series](#)
- [Multilevel Maps](#)
- [Zooming & Scrolling](#)
- [Object Overlays](#)

**Visualize Geographic Data**



[View Movie \(Small\)](#) [View Movie \(Large\)](#)

Geographic data can be a complicated subject to visualize. Chart FX Maps allows you to apply your geographic data to any of the maps included in our comprehensive library while taking advantage of the powerful Chart FX interface.

**Chart FX Maps Resources**

[Chart FX Maps Quick Tour](#)  
Review an application using Chart FX Maps in a Web Forms environment.

[Chart FX Maps Quick Start Guide](#)  
A guide to get you up and running quickly with Chart FX Maps.

[Chart FX Maps Feature Film](#)



**Headquarters:** Sacramento, California, USA

**Faults:**

AWFUL DEMO

Extension Pack

A lot of information needs to be downloaded

**Features:**

Information downloads provided

Most maps available

Price: \$1499

Extension to ChartFX - \$2699

FLEXIBLE!

Not just geographic maps



**Dundas** Data Visualization *Advanced Data Visualization for Microsoft™ Technologies*

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We offer products for Charting, Data Visualization and the creation of Digital Dashboards for .NET, Reporting Services & SharePoint

Products: Dundas Chart, Dundas Gauge, Dundas Map

News & Press: Dundas wins 5th SDTimes 100 award, Dundas Gauge for .NET v2.0 now available

Why Dundas for Data Visualization?: Data Visualization Technologies, Success Stories

Dundas Announcement: Just Announced Dundas Data Visualization to be part of SQL Server 2008

**Headquarters:** Toronto, Ontario, Canada

**Faults:**

Lengthy tutorial

Not hands-on

Predefined maps from library

**Features:**

Appears on all pertinent Google Searches

Cost - \$699

Informative tutorial

Built-in panning and zooming

World and continent maps

Predefined maps from library

Serialize maps as XML or binary

Symbols/pictures attached to all/some layers

Distance scale/legend/color configuration



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**Industry leading Data Visualization Solutions for Microsoft Technologies.**

Our industry leading technology has benefited Fortune 500 companies for over a decade.

We offer products for Charting, Data Visualization and the creation of Digital Dashboards for .NET, Reporting Services & SharePoint

skip ↗

**News & Press** more »

**Why Dundas for Data Visualization?**

**Dundas Announcement**

**SDTimes 2007 100** **Dundas wins 5th SDTimes 100 award**  
Once again winners in the components category. [more »](#)

**Version 2.0** **Dundas Gauge for .NET v2.0 now available**  
AJAX enabled with new 3D styles, Bullet

**Data Visualization Technologies**  
Dundas offers solutions for .NET, SQL Reporting Services & SharePoint [more »](#)

**Success Stories**  
Some examples of how we've helped some customers achieve their goals [more »](#)

**Just Announced**  
Dundas Data Visualization to be part of **SQL Server 2008**

**Headquarters:** Toronto, Ontario, Canada

**Faults:**

Lengthy tutorial

Not hands-on

Predefined maps from library

**Features:**

Appears on all pertinent Google Searches

Cost - \$699

Informative tutorial

Built-in panning and zooming

World and continent maps

Predefined maps from library

Serialize maps as XML or binary

Symbols/pictures attached to all/some layers

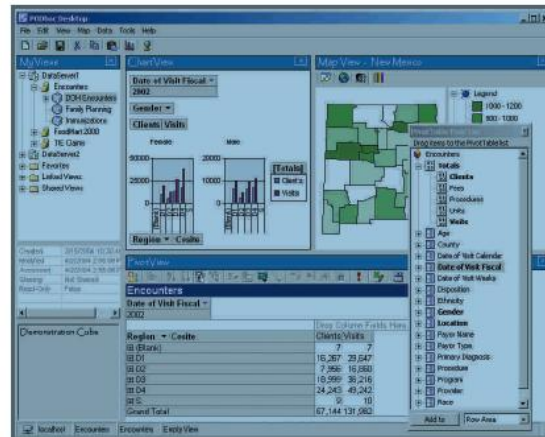
Distance scale/legend/color configuration



# POD<sup>hoc</sup> Reporting

*Comprehensive Ad Hoc Reporting Tool*

Starting with the pivot table field list, the number of clients and visits to public health offices were dragged and dropped into the pivot view, generating a chart view that provides a breakout by gender and visits. The map view (available with the GIS version of PODhoc Reporting) dynamically updates for each selected cell in the pivot view showing the geographic disbursement of clients across the state.



How does it work?

All data in a database or series of databases can be connected to a data cube for ad hoc reporting. Then users with privileges to a particular cube can drag and

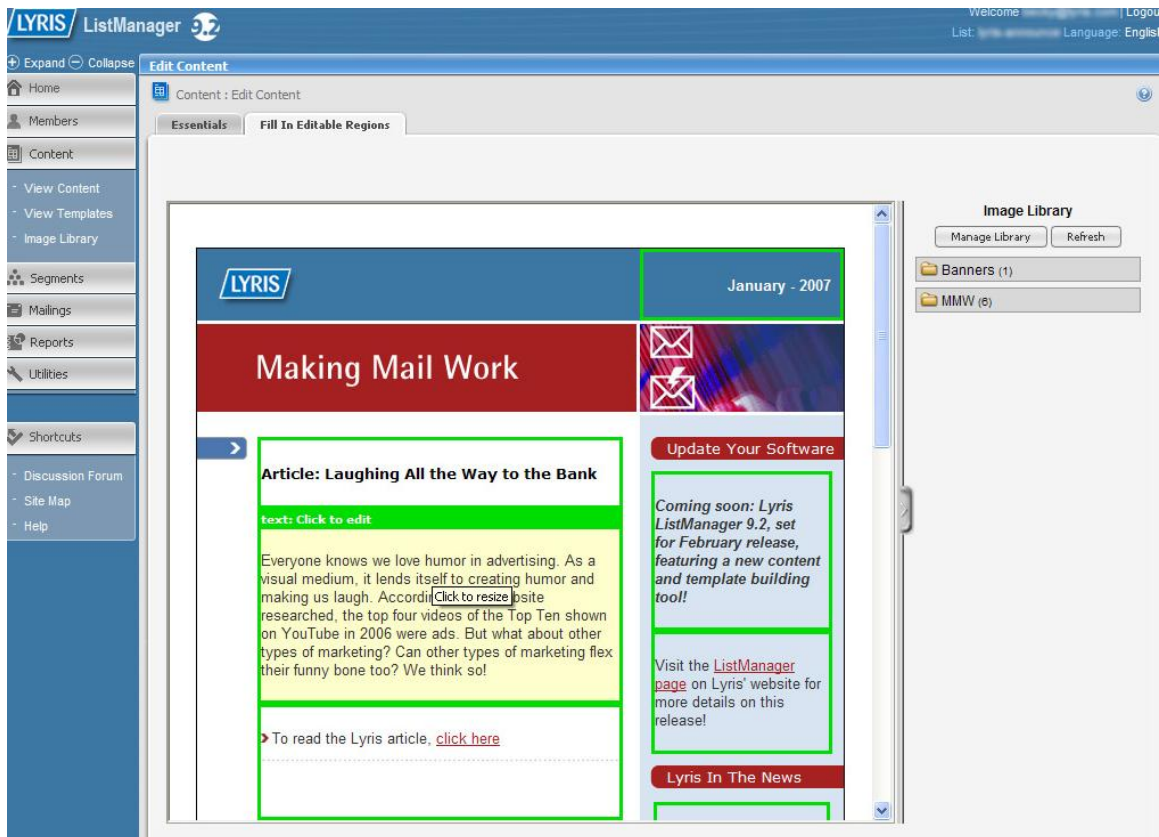
**Headquarters:** Albuquerque, New Mexico

## **Faults:**

- Requires a LOT of extra software
- No links on the site; long and lengthy
- No demo

## **Features:**

- Uses OLAP technology and supports all ODBC compliant data sources
- Integrated with Microsoft Office and paste graphs directly, export data from Excel
- Drag and drop data elements
- Real time GIS data mapping provides visualization
- Creates new elements without touching the data source



**Headquarters:** Emeryville, California

**Faults:**

- Customer representatives must call to use demo
- Exclusively used for tracking email campaigns, newsletters and discussion groups
- Powered by Yahoo Maps
- Only have maps from the United States

**Features:**

- Very cheap (starting at \$675)
- Free downloads for up to 200 people
- HTML editor
- Large Image Library, with drag and drop simplicity

**XCEED**  
MULTI-TALENTED COMPONENTS

**Welcome**  
 > Index

**Look & feel**  
 Solid foundation  
 Grid regions  
 Custom painting

**Editing**  
 Rich cell editors  
 Dynamic editor display  
 Validation  
 Error display

**Data presentation**  
 Grouping  
 Master/detail

**Printing and Exporting**  
 Print and export grid  
 Create Reports

**Data binding**  
 Powerful data binding  
 True unbound mode

**Extensibility**  
 Extensibility  
 Advanced example

**Welcome to the Xceed Grid Live Explorer!**  
 Select a topic to see how Xceed Grid for .NET can perfectly meet your needs.

Solid foundation    Grid regions    Custom painting    Rich cell editors    Dynamic editor display

Validation    Error display    Grouping    Master/detail    Print and export grid

Create Reports    Powerful data binding    True unbound mode    Extensibility    Advanced example

Download / Purchase

Sales  
Support

1-800-865-2626  
1-450-442-2626

**Headquarters:** Emeryville, CA

**Faults:**

- Minimal cost is \$10,350
- \$50 minimum for support
- Cannot import from Excel directly
- Very technical website

**Features:**

- Supports custom grouping and multiple group levels
- Binds more data sources than any other grid (jagged arrays, ILists, IListSouces)
- Unlimited-size fixed header and footer regions that versatile
- Lots of VB.NET and C# samples

**LogiXML** | BUILDING BLOCKS FOR AN INTELLIGENT ENTERPRISE

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Home | Products | Solutions | Customers | Partners | Support | Company

Logi 8 | Logi 8 Components | **Logi 8 Products**

Products > Logi 8 > Logi OLAP Reporting > Overview

**PRODUCTS**

**LogiXML OLAP Reporting**

**Dynamic Interactive Analysis and Sophisticated Visualization of your OLAP Cubes**

Some organizations deal with massive numbers of records and need to optimize their data for analysis, keeping pre-calculated data dimensions in [OLAP 'cubes'](#) to get faster answers to critical business questions.

LogiXML's zero-footprint, Logi OLAP Reporting product brings the power of [OLAP analysis](#) to any users across your organization. It empowers your users to quickly make sense of the corporate data in your Microsoft Analysis Services OLAP cubes. They can get immediate answers to their 'why' questions.

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- Logi Ad Hoc Reporting
- Logi Info
- Logi OLAP Reporting
- Logi Mart

**Library**

- Datasheet
- White Papers
- DevNet
- Glossary

**What Do You Want To Do**

- Take a Product Tour
- Request a Demo
- Get Training
- Contact Us

REQUEST A DEMO

**Headquarters:** McLean, Virginia

**Faults:**

- Relatively pricy
- Very long tutorial, without any “do-it-yourself” usability
- Website is bland
- Minimal of \$749 for year-long of support
- \$300 2 hours training session
- Requires Microsoft Analysis Service
- Relatively expensive (\$5,000 per processor)

**Features:**

- User-friendly website
- Versatility (allows you to adjust cube dimension and measure selections)
- Wide variety of standard charts
- Animated flash charts
- Imports data directly from Excel
- Able to create into PDF

## Bibliography

1. "Database Definitions for Lyris ListManager." Lyris. 20 June 2007  
<[http://www.lyris.com/products/listmanager/db\\_defined.html](http://www.lyris.com/products/listmanager/db_defined.html)>.
2. "Dundas Map for .NET Detailed Feature List." Dundas Data Visualization. 20 June 2007  
<[http://www.dundas.com/Products/Map/NET/Features/index.aspx#Map\\_Wizard](http://www.dundas.com/Products/Map/NET/Features/index.aspx#Map_Wizard)>.
3. "Extensions Pack: Chart FX Maps." Software FX. 21 June 2007  
<<http://eu.softwarefx.com/EXTENSIONS/FEATURESMAPS.ASPX?USSfxRef=www.google.com%2fsearch%3fq%3dmap%2breporting%2c%2bmap%2bchart%26hl%3den%26start%3d50%26sa%3dN>>.
4. "GeoBrush." Belltech Systems. 20 June 2007 <<http://www.geobrush.com/>>.
5. "Logi OLAP Reporting." Zero Footprint. LogiXML: Building Blocks for an Intelligent Enterprise. 20 June 2007  
<<http://www.logixml.com/rdPage.aspx?rdReport=LogiOLAPFeatures#01>>.
6. "PODhoc Reporting." POD, Inc. 21 June 2007  
<<http://www.podassoc.com/PODHoc.pdf>>.
7. "Sokolow Main Page." Sokolow. 26 June 2007 <<http://www.sokolow.pl/>>.
8. "Some of Our Customers." Dundas Data Visualization. 26 June 2007  
<<http://www.dundas.com/Company/Why/Customers.aspx>>.
9. "The Meat Sector." PKM Duda. 26 June 2007  
<<http://www.zmduda.pl/en/meat.htm>>.
10. "Traffic Manager." deCarta. 21 June 2007  
<<http://www.decarta.com/products/tm/index.html>>.
11. "TWILIGHT - Communications Provider Toolkit." ComArch Information Technology. 21 June 2007 <<http://twilight.comarch.com/>>.
12. "Xceed Grid for .NET." Xceed Multitalented Components. 21 June 2007  
<[http://xceed.com/Grid\\_WinForms\\_Intro.html](http://xceed.com/Grid_WinForms_Intro.html)>.