

What Does It *Really* Cost to Create a Report?

Introduction

This white paper presents a brief analysis of the direct labor costs involved in generating a report. It breaks reports into two categories. Basic reports are those you generate in less than a day. Typical basic reports include sales summaries and simple financials. Advanced reports are those that you cannot produce without additional help. Advanced reports incorporate data from several databases and involve complex calculations or totaling. In other words basic reports are those which you can do yourself in a day or less while advanced reports require outside special expertise.

Basic Reports

A basic report is one that you can easily generate from your company's data warehouse with the tools provided to you (Crystal Reports, Excel/DAO/ODBC). Basic reports are typically little more than subsets of a data set extracted and formatted with various totals.

The cost to produce these reports is minimal- you know what you want, you have the means to produce it, and you do not need to involve other people. The table below is a typical cost breakdown for a basic report.

Basic Report Cost Breakdown

Description	Who	Hours	Cost/Hour	Extension
Generate report	You	4	75	300
Review results with manager	You	1	75	75
	Mgr	1	150	150
Total Cost				\$525

Advanced Reports

Unfortunately, most reports do not fall under the simple category. Unless you have a hard-core IT background, you will need assistance in generating the more complex reports you and your department need to effectively manage your business. Advanced reports involve more people. This adds to the complexity and time cost. But more importantly, advanced reports cannot be generated with basic database tools- **coding** is required. The code might be Visual Basic or some 4th generation programming language. Why is code needed? Basic database tools lack many analytic routines (e.g. statistical or financial), they lack the ability to merge data from non-database sources, they lack the ability to present the data in just the way you want. As soon as code is involved the price goes up. Many studies have shown that programmers generate 5-10 lines of debugged documented code per day¹. An advanced report can easily require two or more pages of code. Assuming that your company has above average programmers capable of coding at twice the average rate (i.e. 20 lines per day), then two pages of code (100 lines) will require five days or forty hours.

The table below summarizes the basic costs of generating an *advanced* report. Additional time is added for reviewing the report with your manager, and then passing that knowledge onto the programmer. The greatest expense is the actual coding of the report. Additional time is allocated upon completion to review the results with you, and then your manager. Note that this is an optimistic estimate. We are assuming that everything works first time as expected. Other hidden costs have not been included but should be mentioned. These include the costs of the database and programming tools used by the programmer as well as the training time required to become proficient in their use.

¹ See <http://www.cs.unc.edu/~stotts/COMP145/text/schedulingproj3.html> for a discussion of scheduling programming projects.

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Advance Report Cost Breakdown

Description	Who	Hours	Cost/Hour	Extension
Spec out report with your manager	You	2	75	150
Review specifications with IT	Mgr	1	150	150
	You	2	75	150
	IT	2	150	300
IT Code (2 pages of code, 100 lines)	IT	40	150	6,000
Review results with IT	You	1	75	75
	IT	1	150	150
Review results with manager	You	1	75	75
	Mgr	1	150	150
Total Cost				\$7,200

Advanced Reporting with V4™

The steps to produce a report with V4 are identical to the above. You will still need to bring in an IT person, be it from your company's IT pool or from MKS. What is different is the time required to *code* the report. Most V4 analyses run from 5 to 15 **lines**² of rules and can be created easily in an eight hour day.

V4 Cost Breakdown

Description	Who	Hours	Cost/ Hour	Extension
Spec out report with your manager	You	2	75	150
	Mgr	1	150	150
Review specifications with IT/MKS	You	2	75	150
	IT/MKS	2	150	300
V4 Rules (10 – 20 lines of rules)	IT/MKS	8	150	1,200
Review results with IT	You	1	75	75
	IT/MKS	1	150	150
Review results with manager	You	1	75	75
	Mgr	1	150	150
Total Cost				\$2,400

One can readily see that the use of V4 dramatically reduces the cost of generating advanced reports. V4's ability to elegantly express complex data relationships and operations results in fewer lines of code (or V4 rules) which results in fewer programming hours which results in reduced costs. In the above example, the cost of a V4 report is 1/3 the cost of a traditional report.

You get more than just a report with V4. V4 results are presented fully formatted in Excel. From there you can easily print, graph, and/or export the results to a wide range of other products. Drill-downs can be done directly from Excel to determine the where and how and why of a particular value. What-ifs can be performed to immediately test hypotheses and new ideas.

² For you non-believers, see "The V4 Challenge" on our web site at www.mksinc.com or ask your MKS sales representative for a copy.