



2.0 SYSTEMS REVIEWED

For the Common Origination and Disbursement current environment assessment, 3 systems were reviewed: the Recipient Financial Management System (RFMS), Campus Based System (CBS), and Loan Origination (LOS).

2.1 Recipient Financial Management System (RFMS)

The Recipient Financial Management System (RFMS) is used by Student Financial Assistance (SFA) to administer the Pell Grant Program. A new version of the system was developed by the ACS Government Solutions Group, Inc and implemented in June of 1999. The previous version of the system implemented in 1993 is still in production because award year data must be accessible for processing for up to 5 years and 3 months after its close in order to accommodate late adjustments allowed under special circumstances. As part of the current environment assessment, this section documents the following for Fiscal Year 1999:

- Portfolio Size (dollar amount of the Pell Grants disbursed)
- Total Cost
- Customer Service Cost
- Cost per Grant
- Original Development Cost

Portfolio Size

The data in the following table, provided by the Department of Education, lists the dollar amount of Pell Grants disbursed to students from 1995 to 1999 with the growth percentage calculated for each year. The amounts include aid available to students and the administrative cost allowance (approximately 5%). Expenditure data is currently unavailable for Fiscal Years 1998 and 1999 and are estimates of the allocation of funds.

	Pell Grant Amount (\$000)	% Growth
1995	\$5,463,000	
1996	\$5,782,000	5.84%
1997	\$6,350,000	9.82%
*1998	\$7,255,000	14.25%
*1999	\$7,345,000	1.24%
* Estimates		

Total Cost

Costs are taken from Fiscal Year 1999 invoices which are grouped into 3 schedules: Schedule A, B, and C.



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Schedule A represents costs related to firm fixed price deliverables for the contract year including costs such as key personnel (e.g. operations manager, customer service supervisor), system maintenance (e.g. scheduled normal school development and testing for the contract year), and production processes (e.g. schedule and monitor normal production and operate user support hotline).

Schedule B represents labor costs for task orders for new development work. Schedule A contains development work that is expected each school year. The development work in Schedule B is not part of the normal school year development or change requests. Labor costs are for positions such as systems analysts, programmers, and operations analysts.

Schedule C represents other direct costs related to task orders and time and materials including costs for travel, hardware and software, reproduction, etc.

The total cost for RFMS for Fiscal Year 1999 is calculated by taking the costs for schedules A, B, and C from actual invoices and adding these to cost for the Virtual Data Center (VDC) which was provided by the Department of Education (the vendor for VDC sent the Department of Education one invoice amount for Fiscal Year 1999 of \$7,171,008 that contains both the cost associated with RFMS and the Campus Based system; the COTRs for each contract agreed that 90% of the cost could be allocated to RFMS, and 10% to Campus Based):

	FY 1999 Cost
Schedule A	\$5,142,102
Schedule B	\$881,048
Schedule C	\$1,805,210
Virtual Data Center	\$6,453,907
Total Cost	\$14,282,267

Customer Service Cost

Customer service costs represent 2% of the total amount of the invoice at \$305,670. This cost is calculated by summing the following deliverables listed on the Fiscal Year 1999 invoices: Customer Service Supervisor, Respond to School by Phone, Respond to School by Letter, Operate User Support Hotline (<= 500 calls/week), and Operate User Support Hotline (> 500 calls/week). The calculation is listed in the following table:



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Product No.	Deliverable	Total
C-1.2.3.2.7	Supervisor	\$69,120
C-5.4.8A (1)	Respond to School by Phone	\$1,309
C-5.4.8A (2)	Respond to School by Letter	\$0
C-5.4.2 (1)	Operate User Support Hotline (≤ 500 calls/week)	\$205,206
C-5.4.2 (2)	Operate User Support Hotline (> 500 calls/week)	\$30,036
	Total Customer Service Cost	\$305,671
	Total FY 1999 Cost	\$14,282,267
	Customer Service Cost as a % of the Total FY 1999 Cost	2%

Cost Per Unit

The average number of Pell grants for a fiscal year is approximately 3.6 million according to the Contracting Officer's Technical Representative (COTR) for RFMS. Using the total cost for RFMS of \$14,282,267, the cost per grant is:

RFMS Total Cost	Pell Grants Processed	Cost/Grant
\$14,282,267	3,600,000	\$3.97

Original Development Cost

The current RFMS system was implemented in May of 1999 at a cost of \$1,617,006 (amount provided by the COTR). Using the Consumer Price Index (CPI), this amount equals \$1,641,329 today based on the following calculation:

Current Year Dollars = (Original Development Cost/CPI of Development Year) x Current Year CPI

$$\underline{\$1,641,329} = (\$1,617,006/166.2) \times 168.7$$

Consumer Price Indices for January 2000 = 168.7 (latest month available), and May 1999 = 166.2 were obtained from the Department of Labor.



2.2 Campus Based System (CBS)

The Campus Based System is a mainframe subsystem that calculates and records financial data resulting from institutions applying for and being awarded Campus Based funds for Perkins loans, Work Study Programs, and Supplement Educational Opportunity Grant (SEOG). The system was implemented in 1985 with enhancements made over the years. The current vendor supporting the system is Universal Automation Labs. As part of the current environment assessment, this section documents the following for Fiscal Year 1999:

- Portfolio Size (dollar amount of the Campus Based funds disbursed)
- Total Cost
- Customer Service Cost
- Cost per Loan Origination
- Original Development Cost

Portfolio Size

The data in the following table, provided by the Department of Education, lists the dollar amount of SEOG, Perkins, and Work Study disbursed to students from 1995 to 1999 with the growth percentage calculated for each year. These amounts include Federal and Institutional matching funds:

	SEOG (\$000)	% Growth	Work- Study (\$000)	% Growth	Perkins Loan¹ (\$000)	% Growth
1995	\$764,327		\$763,776		\$1,029,309	
1996	\$762,049	-0.30%	\$776,118	1.62%	\$1,021,754	-0.73%
1997	\$811,235	6.45%	\$906,434	16.79%	\$1,062,047	3.94%
*1998	\$777,000	-4.22%	\$1,002,000	10.54%	\$1,058,000	-0.38%
*1999	\$784,000	0.90%	\$1,044,000	4.19%	\$1,058,000	0.00%
¹ Total Aid Available includes FCC, institutional matching funds and Loan repayments						
* Estimates						

Total Cost

Costs are taken from Fiscal Year 1999 invoices which are grouped into the seven categories marked by roman numerals on the actual invoice:

- I. System Support
- II. Central Facility Subsystem
- III. PC Subsystem
- IV. Task Orders
- V. Documentation
- VI. Miscellaneous
- VII. Supplies, Travel, Delivery, and 2nd Task Orders



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The total cost for the Campus Based System for Fiscal Year 1999 is calculated by taking the total costs for each roman numeral category included in the invoices and adding these to the cost allocated to the Campus Based System for use of the Host mainframe and Virtual Data Center (VDC) which was provided by the Department of Education (the vendor for VDC sent the Department of Education one invoice amount for Fiscal Year 1999 of \$7,171,008 that contains both the cost associated with RFMS and the Campus Based system; the COTRs for each contract agreed that 90% of the cost could be allocated to RFMS, and 10% to Campus Based):

	FY 1999 Cost
I. System Support	\$247,677
II. Central Facility Subsystem	\$359,168
III. PC Subsystem	\$60,100
IV. Task Orders	\$239,319
V. Documentation	\$336,236
VI. Miscellaneous	\$0
VII. Supplies, Travel, Delivery, 2nd Task Orders	\$527,409
Host Cost	\$300,000
Virtual Data Center (VDC)	\$717,101
Total Cost	\$2,787,010

Customer Service Cost

Customer service is a deliverable listed in the invoice and is charged at a fixed rate of \$1,700 per month for a total of \$20,400 for the 1999 Fiscal Year, or 1% of the total cost for Campus Based Systems:

Customer Service Cost	Total FY 1999 Cost	Customer Service Cost as a % of the Total FY 1999 Cost
\$20,400	\$2,787,010	1%

Cost Per Unit

For the purposes of this analysis and to be consistent with the cost per unit calculated for Pell Grants and Direct Loans, the unit is defined as a Campus Based Program component (Perkins Loan, Supplemental Grant, or Work Study). Since the funds disbursed for Campus Based programs are not tracked within the Campus Based System at this level, unit based costs were not calculated.



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Original Development Cost

According to the Contacting Officer's Technical Representative (COTR), the original CBS was developed at a cost of \$600,000 in 1985. Using the Consumer Price Index, this cost equals \$907,706 today based on the following calculation:

Current Year Dollars = (Original Development Cost/CPI of Development Year) x Current Year CPI

$$\underline{\$907,706} = (\$600,000/107.6) \times 168.7$$

Consumer Price Indices for January 2000 = 168.7 (latest month available), and 1985 = 107.6 were obtained from the Department of Labor.



2.3 Loan Origination System (LOS)

The Loan Origination System (LOS) is used by Student Financial Assistance (SFA) to administer the Direct Loan program. The current production version of the system is supported by EDS and was implemented in March of 1997. As part of the current environment assessment, this section documents the following for Fiscal Year 1999:

- Portfolio Size (dollar amount of the Loan Originations disbursed)
- Total Cost
- Customer Service Cost
- Cost per Loan Origination
- Original Development Cost

Portfolio Size

The data in the following table, provided by the Department of Education, lists the dollar amount of Direct Loans disbursed to students from 1995 to 1999 with the growth percentage calculated for each year. The data in this table is for Direct Loans only and excludes Direct Loan Consolidations.

	Direct Loan Amount (\$000)	% Growth
1995	\$4,612,000	
1996	\$8,427,000	82.72%
1997	\$9,752,000	15.72%
1998	\$10,065,000	3.21%
1999	\$9,953,000	-1.11%

Total Cost

Costs were provided by the Department of Education for Fiscal Year 1999 for Loan Origination and are summarized in the following 5 categories: Deliverables, Ad Hoc Information, Development, Key Personnel, and Virtual Data Center. These costs were calculated as part of the current environment assessment for the Direct Loan Servicing Current Environment Assessment and were approved by the Department of Education.

During Fiscal Year 1999, the LOS system was migrated to the Virtual Data Center mainframe and only 5 months worth of cost data was available (\$334,777). Therefore, a per month cost was calculated and multiplied by 12 to arrive at the \$803,465 annual cost. (NOTE: For the Direct Loan Servicing Current Environment Assessment (Version 1.0), the actual cost of \$334,777 was used instead of an annualized cost because the number of months was not known at that time).



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The total costs for LOS for Fiscal Year are as follows:

	FY 1999 Cost
Deliverables	\$27,169,065
Ad Hoc	\$414,952
Development	\$8,224,374
Key Personnel	\$1,916,964
Virtual Data Center	\$803,465
Total Cost	\$38,528,820

Customer Service Cost

Customer service costs represent 31% of the total amount of the LOS total cost for Fiscal Year 1999. This percentage was determined from Activity-Based Costing (ABC) analysis that the Contracting Officer's Technical Representative (COTR) has performed with the CFO's office. As a result, the total customer service cost was determined by taking this percentage and applying it against the Fiscal Year 1999 cost for LO as shown in the following table:

Total FY 1999 Cost	Customer Service Cost as a % of Total Cost (calculated from Activity-Based Costing)	Total Customer Service Cost
\$38,528,820	31.0%	\$11,943,934

Cost Per Unit

The number of loan originations for Fiscal Year 1999 (provided by the COTR) was 2,494,965. Using the total cost for LO of \$39,332,234, the cost per origination is:

LO Total Cost	Originations	Cost/Origination
\$38,528,820	2,494,965	\$15.44

Subtracting the customer service cost from the total cost, the cost per origination is:

LO Cost (minus Customer Service Cost)	Originations	Cost/Origination
\$26,584,886	2,494,965	\$10.66

NOTE: The cost/unit for LOS of \$15.44 differs from the cost/unit calculated in the Direct Loan Servicing Current Environment Assessment (Version 1.0) of \$20.80 because the COTR was able to provide a more accurate count of loan originations for FY 1999 for this analysis than was available when the data for the Direct Loan Servicing Assessment was gathered towards the end of calendar year 1999. The number of loan originations used in that analysis was 1,829,502.



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Original Development Cost

According to the the Contracting Officer's Technical Representative (COTR), the current LO system was implemented in March of 1997 at a total cost of \$20,800,000. The system was supposed to be implemented in March of 1996 and the Department of Education had facilities in Montgomery, Alabama and personnel in place to support this system that they did not want to disband, so they paid to keep these resources during the year delay at a cost of \$9,000,000 (\$900,000/month for 10 months). Therefore, the \$20,800,000 includes \$11,800,000 of actual development costs and \$9,000,000 of costs to keep facilities and personnel in place during the implementation delay.

Using the Consumer Price Index, the original development cost equals \$21,985,965 today based on the following calculation:

Current Year Dollars = (Original Development Cost/CPI of Development Year) x Current Year CPI

$$\mathbf{\$21,985,965 = (\$20,800,000/159.6) \times 168.7}$$

Consumer Price Indices for January 2000 = 168.7 (latest month available), and March 1997 = 159.6 were obtained from the Department of Labor.