Summary of ILFs, RETs, and DETs Counted

This section gives a summary of the ILFs, RETs, and DETs counted before calculating the complexity and contribution to the unadjusted function point count.

Summary of ILFs Counted

The following table shows the ILF count for the Human Resources System. It also lists the data that was not counted.

ILFs Identification	Not Counted
• Job information • Screen security • Employee security • Suspended jobs • Report definition • Employee information (HR application) • Employee information (Security application) • Employee information (Mail Distribution application)	• Audit data for inquiries and reports • Alternate index

Summary RET and DET Count

The RET and DET counts for the HR Application are recorded in the following table.

ILFs	RETs	DETs
• Job information	2	5
• Suspended jobs	2	6
• Report definition	1	4
• Employee information	1	6

The RET and DET counts for the Security Application are recorded in the following table.

ILFs	RETs	DETs
• Screen security	2	8
• Employee security	1	4
• Employee information	1	3

The RET and DET counts for the Mail Distribution Application are recorded in the following table.

ILFs	RETs	DETs
• Employee information	1	3

ILF Complexity and Contribution

The last section of the ILF examples shows the final steps to determine ILF complexity and contribution to the unadjusted function point count.

The final steps are as follows:

1. Rate the ILF complexity.
2. Translate the complexity to unadjusted function points.
3. Calculate the internal logical files' contribution to the total unadjusted function point count.

Rate ILF Complexity

The functional complexity is rated as low, average, or high. The following ILF complexity matrix is used to rate the ILF complexity.

	1 to 19 DETs	20 to 50 DETs	51 or more DETs
1 RET	Low	Low	Average
2 to 5 RETs	Low	Average	High
6 or more RETs	Average	High	High

The following table shows the functional complexity for each HR Application ILF. The same process would be applied to the Security and Mail Distribution data function types to determine complexity.

ILFs	RETs	DETs	Functional Complexity
1. Job information	2	5	Low
2. Suspended jobs	2	6	Low
3. Report definition	1	4	Low
4. Employee information	1	6	Low

Translate ILFs

The following table translates the internal logical files' functional complexity to unadjusted function points.

Functional Complexity Rating	Unadjusted Function Points
Low	7
Average	10
High	15

The complexity is recorded in the table in the following section.

Calculate ILF Contribution

The following table shows the total contribution for the ILF functions to the unadjusted function point count for the HR application:

Function Type	Functional Complexity			Complexity Totals	Function Type Totals
ILF	4	Low	X 7 =	28	
	0	Average	X 10 =	0	
	0	High	X 15 =	0	
					28

This total will be recorded on a table that lists all the function types. The final total for all function types is the unadjusted function point count.

The Appendix includes a table to record the totals for all function types.

Summary of EIFs, RETs, and DETs Counted

This section summarizes the EIFs, RETs, and DETs counted before calculating the complexity and contribution to the unadjusted function point count.

Summary of EIFs Identified

The following table shows the EIF count for the HR application. It also lists the data that was not counted.

EIFs Identified	Not Counted
• Location information • Conversion information • Window help • Field help	• Old HR system employee data • Transaction Input File • Employee listing information

The following table shows the EIF count for the Pension application. It also lists the data that was not counted.

EIFs Identified	Not Counted
• Employee information	

Summary RET/DET Count

The RET and DET counts for the HR application are recorded in the following table.

EIFs	RETs	DETs
Location information	1	6
Conversion information	1	2
Window help information	1	2
Field help information	1	5

The RET and DET counts for the Pension application are recorded in the following table.

EIFs	RETs	DETs
Employee information	1	2

EIF Complexity and Contribution

This section describes the final steps to determine EIF complexity and contribution to the unadjusted function point count.

The final steps are to:

1. Rate the EIF complexity.
2. Translate the complexity to unadjusted function points.
3. Calculate the external interface files' contribution to the total unadjusted function point count.

Rate EIF Complexity

The functional complexity is rated as low, average, or high. The following RET/DET matrix rates the EIF complexity.

	1 to 19 DETs	20 to 50 DETs	51 or more DETs
1 RET	Low	Low	Average
2 to 5 RETs	Low	Average	High
6 or more RETs	Average	High	High

Legend:
RET = Record Element Type
DET = Data Element Type

The following table shows the functional complexity for each EIF within the HR application.

EIFs	RETs	DETs	Functional Complexity
Location information	1	6	Low
Conversion information	1	2	Low
Window help information	1	2	Low
Field help information	1	5	Low

Translate EIFs

The following table is used to translate the functional complexity to unadjusted function point counts.

Functional Complexity Rating	Unadjusted Function Points
Low	5
Average	7
High	10

The complexity is recorded in the table in the following section.

Calculate EIF Contribution

The following table shows the total contribution for the EIF function type within the HR application.

Function Type	Functional Complexity			Complexity Totals	Function Type Totals
EIF	4	Low	X 5 =	20	
	0	Average	X 7 =	0	
	0	High	X 10 =	0	
					20

This total will be recorded on a table that lists all the function types. The final total for all function types is the unadjusted function point count.

The Appendix includes a table to record the totals for all function types.

Summary of EIs, FTRs, and DETs Counted

This section gives a summary of EIs, FTRs, and DETs counted before calculating the complexity and contribution to the unadjusted function point count.

Summary of EIs Counted

The following table shows the EIs counted for the HR application. It also lists the data that was not counted.

EIs Counted	Not Counted
Control information	Referencing data from another application.
Add job information (screen input)	
Add job information (batch input)	
Correct suspended transactions	
Employee job assignment	
Employee migration	
EI with Screen Output -1	
EI with Screen Output -2	

Summary FTR/DET Count

The FTR and DET counts are recorded in the following table.

External Input	FTRs	DETs
Assignment report information	1	5
Add job information (screen input)	1	7
Add job information (batch input)	2	6
Correct suspended transactions	1	7
Employee job assignment	3	7
Employee migration	1	11
EI with Screen Output -1	2	11
EI with Screen Output -2	1	6

External Input Complexity and Contribution

This last section shows the final steps to determine EI complexity and contribution to the unadjusted function point count.

The final steps are as follows:

1. Rate the EI complexity.
2. Translate the complexity to unadjusted function points.
3. Calculate the external inputs' contribution to the total unadjusted function point count.

Rate EI Complexity

The following ***complexity matrix*** rates the EI complexity.

	1 to 4 DETs	**5 to 15 DETs**	**16 or more DETs**
0 to 1 FTR	Low	Low	Average
2 FTRs	Low	Average	High
3 or more FTRs	Average	High	High

Legend:

FTR = File Type Referenced

DET = Data Element Type

The following table shows the functional complexity for each EI.

External Input	**FTRs**	**DETs**	**Functional Complexity**
Assignment report information	1	5	Low
Add job information (screen input)	1	7	Low
Add job information (batch input)	2	6	Average
Correct suspended jobs	1	7	Low
Employee job assignment	3	7	High
Employee migration	1	11	Low
EI with Screen Output -1	2	11	Average
EI with Screen Output -2	1	6	Low

Translate EIs

The following table translates the external inputs' functional complexity to unadjusted function points.

Functional Complexity Rating	Unadjusted Function Points
Low	3
Average	4
High	6

The complexity is recorded in the table in the following section.

Calculate EI Contribution

The following table shows the total contribution for the EI function type.

Function Type	Functional Complexity		Complexity Totals		Function Types Totals
EI	5	Low	X 3 =	15	
	2	Average	X 4 =	8	
	1	High	X 6 =	6	
					29

This total will be recorded on a table that lists all the functions. The final total for all functions is the unadjusted function point count.

The Appendix includes a table to record the totals for all the function types.

Summary of EOs, FTRs, and DETs Counted

This section gives a summary of the EOs, FTRs, and DETs counted before calculating the complexity and contribution to the unadjusted function point count.

Summary of EOs Counted

The following table shows the EOs counted for the HR application. It also lists the data that was not counted.

EOs Counted	Not Counted
Jobs with Employees Report	New dependent transactions to benefits
Employees by Assignment Duration Report	error/confirmation messages
Performance Review Notification	
Weekly Employee Report	
Printed Check	
Check Transaction File	

Summary FTR/DET Count

The FTR and DET counts are recorded in the following table.

External Output	FTRs	DETs
Jobs with Employees Report	4	5
Employees by Assignment Duration Report	3	7
Performance Review Notification	3	4
Weekly Employee Report	1	3
Printed Check	1	3
Check Transaction File	1	4

External Output Complexity and Contribution

This last section of the EO examples shows the final steps to determine EO complexity and contribution to the unadjusted function point count.

The final steps are as follows:

1. Rate the EO complexity.
2. Translate the complexity to unadjusted function points.
3. Calculate the external outputs' contribution to the total unadjusted function point count.

Rate EO Complexity

The following ***complexity matrix*** rates the EO complexity.

	1 to 5 DETs	**6 to 19 DETs**	**20 or more DETs**
0 to 1 FTR	Low	Low	Average
2 to 3 FTRs	Low	Average	High
4 or more FTRs	Average	High	High

Legend:

FTR = File Type Referenced (Combination of input and output side)

DET = Data Element Type (Combination of input and output side)

The following table shows the functional complexity for each EO.

External Output	**FTRs**	**DETs**	**Functional Complexity**
Jobs with Employees Report	4	5	Average
Employees by Assignment Duration Report	3	7	Average
Performance Review Notification	3	4	Low
Weekly Employee Report	1	3	Low
Printed Check	1	3	Low
Check Transaction File	1	4	Low

Translate EOs

The following table translates the external outputs' functional complexity to unadjusted function points.

Functional Complexity Rating	Unadjusted Function Points
Low	4
Average	5
High	7

The complexity is recorded in the table in the following section.

Calculate EO Contribution

The following table shows the total contribution for the EO function type.

Function Type	Functional Complexity		Complexity Totals		Function Types Totals
EO	4	Low	X 4 =	16	
	2	Average	X 5 =	10	
	0	High	X 7 =	0	
					26

This total will be recorded on a table that lists all the function types. The final total for all function types is the unadjusted function point count.

The Appendix includes a table to record the totals for all the function types.

Summary of EQs, FTRs, and DETs Counted

This section gives a summary of the EQs, FTRs, and DETs counted before calculating the complexity and contribution to the unadjusted function point count.

Summary of EQs Counted

The following table shows the EQs counted for the HR application. It also lists the data that was not counted.

EQs Counted	Not Counted
List of retrieved data	Application menus
Drop-down list box	Second occurrence of field help
Field level help first occurrence	Implied inquiry (previously counted)
Monthly Membership Report	
Check Transaction File	

Summary FTR/DET Count

The FTR and DET counts are recorded in the following table.

External Inquiry	FTRs	DETs
List of retrieved data	1	4
Drop-down list box	1	2
Field level help first occurrence	1	6
Weekly Membership Report	1	3
Check Transaction File	1	2

External Inquiries Complexity and Contribution

This last section of the EQ examples shows the final steps to determine EQ complexity and contribution to the unadjusted function point count.

The final steps are as follows:

1. Rate the EQ complexity.
2. Translate the complexity to unadjusted function points.
3. Calculate the external inquiries' contribution to the total unadjusted function point count.

Rate EQ Complexity

The following ***complexity matrix*** rates the EQ complexity.

	0 to 5 DETs	**6 to 19 DETs**	**20 or more DETs**
0 to 1 FTR	Low	Low	Average
2 to 3 FTRs	Low	Average	High
4 or more FTRs	Average	High	High

Legend:

FTR = File Type Referenced (Combination of input and output side)

DET = Data Element Type (Combination of input and output side)

Functional Complexity: The following table shows the functional complexity for each EQ.

External Inquiry	FTRs	DETs	Functional Complexity
List of retrieved data	1	4	Low
Drop-down list box	1	2	Low
Field level help	1	6	Low
Weekly Membership Report	1	3	Low
Daily Check File	1	2	Low

We would use the higher of the functional complexities to translate the EQs if the complexities were different. Here they are the same.

Translate EQs

The following table translates the external inquiries' functional complexity to unadjusted function points.

Functional Complexity Rating	Unadjusted Function Points
Low	3
Average	4
High	6

The complexity is recorded in the table in the following section.

Calculate EQ Contribution

The following table shows the total contribution for the EQ function type.

Function Type	Functional Complexity		Complexity Totals		Function Types Totals
EQ	5	Low	X 3 =	15	
		Average	X 4 =		
		High	X 6 =		
					15

This total will be recorded on a table that lists all the function types. The final total for all function types is the unadjusted function point count.

The Appendix includes a table to record the totals for all the function types.