UNISYS

5 November 2014

City of Columbus
Department of Technology
1111 East Broad St-3rd Floor
Columbus, OH 43205

Attention: Mr. Mark Freeman
Assistant Director

Subject: **Proposed Statement of Work for Training Services**

Dear Mr. Freeman:

In accordance with your request, please find attached the subject proposed Statement of Work for ClearPath related training services for your consideration.

This proposal is based on the terms and conditions of the existing Contract for Services dated July 18, 2013, authorized by Ordinance 1660-2013, and those contained in the attached Statement of Work. Unisys anticipates that if the Department of Technology accepts this offer, the Statement of Work will be added to the existing contract through a mutually acceptable amendment of such other document the parties may agree upon.

This offer shall remain valid for a period of 45 days from the above date.

Should you have any questions concerning the enclosed offer, or if we can be of further assistance, please contact either me, at (703) 867-6487 or via email at jim.matte@unisys.com, or Mr. Meredith Hughes at (248) 805-5014 or via email at meredith.hughes@unisys.com.

Sincerely,

James Matte
Contracts Manager

UNISYS

City of Columbus

Unisys ClearPath MCP Basics and Database Training Statement of Work

November 5, 2014

This entire Statement of Work ("SOW") is considered confidential. The recipient agrees not to reproduce or make any portion of this document available in any manner except to its employees for the purpose of securing an order for the Unisys services described in this document.

All recommendations, reports and deliverables furnished hereunder are offered for Client consideration only, and Client assumes sole responsibility for any of its actions or decisions made which are based on such recommendations, reports or deliverables. Unisys is not offering to provide a legal compliance assessment of your organization or legal advice or to perform disaster recovery services for Client's business. Client will be solely responsible for interpretation of and compliance with all applicable regulations and requirements impacting its business and for backing up all data.

UNISYS EXPRESSLY DISCLAIMS ANY WARRANTY OR REPRESENTATION (EITHER EXPRESS OR IMPLIED) THAT THE SERVICES PROVIDED WILL IDENTIFY OR ADDRESS ALL POTENTIAL REGULATORY COMPLIANCE OR NON-COMPLIANCE ISSUES OR WILL PROTECT AGAINST ANY OR ALL LOSS OF DATA. Unisys does not warrant any recommendation provided in the course of performing the Services. Unisys shall not be responsible or liable in any way for failure to make any recommendations, nor for Client's reliance on any recommendation provided by Unisys or any action taken by Client as a result of such recommendation.

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Training

Unisys will provide City of Columbus with instructor-led tailored training as set forth herein.

The tailored training will be modified by delivering topics that are relevant and specific to the City of Columbus' ClearPath MCP environment.

Hands-on lab exercises will be included to reinforce the lecture materials. The Services, including pricing and durations are based on a maximum of two (2) students.

The 9 sessions listed in the below table under the *MCP Basic Training* section includes training for an individual who wants to obtain the necessary prerequisite MCP knowledge prior to attending the more advanced database administration courses listed. For an individual **with no MCP background**, the following training is recommended in the order presented.

Courses

	Course Title	Duration
MCP Basic Training (4 days if taught onsite as one 4-day instructor-led classroom course)		
1.	Getting Started with the Unisys MCP (ECP35042)	3 hours if web-based
2.	MCP Disks and Files (ECP35015)	2 hours if web-based
3.	MCP Terminal Emulation (ECP35021)	2 hours if web-based
4.	MCP Task Operations (ECP35014)	4 hours if web-based
5.	MCP CANDE Editing (ECP35022)	4 hours if web-based
6.	MCP CANDE Runtime (ECP35023)	4 hours if web-based
7.	MCP System Operations (ECP35037)	4 hours if web-based
8.	MCP Introduction to Work Flow Language (WFL) (ECP35009)	4 hours if web-based
9.	MCP Utilities (ECP35026)	3 hours if web-based
MCP Database Training		
10.	MCP Enterprise Database Server - Administration and Operations (CEL5021) and ClearPath MCP Enterprise Database Server Data and Structure Definition Language (DASDL) (CEL5027)	8 days on-site instructor-led classroom training.

Outlines describing each course's content are provided in Appendix A, *Course Content*, which follows.

Approach

The above training will be delivered in the order shown over a three week period. Week 1 consisting of the MCP Basic Training sessions (items 1 through 9 above) and weeks 2 and 3 covering the MCP Database Training (item 10 above). This approach will provide the non-experienced MCP database administrators with a solid MCP understanding and foundation before progressing on to more advanced database topics.

Schedule

Unisys will work with the City of Columbus to schedule the training start dates and start / end times which are mutually agreeable to both the students and Unisys instructor. It is recommended that at least a

one-week period is scheduled between the MCP Basic training and the Database training. This will allow the student(s) to absorb and practice the basic materials before moving on to the more advanced topics.

Because of the amount of content to be delivered in an accelerated/streamline mode, it is crucial that classroom and lab hours are adhered to and that students are not interrupted to perform any daily routines/job tasks during the training sessions.

Price

As requested by City of Columbus, the following price options are available for the proposed training to be held on-site at the City of Columbus or as instructor-led web-based sessions delivered over the Internet.

	Course Title	Price
MCP Basic Training (4 days if taught onsite as one 4-day instructor-led classroom course)		
1.	Getting Started with the Unisys MCP (ECP35042)	$8,669 for a 4-day onsite classroom course; or $4,597 for 30 hours of instructor-led web-based training.
2.	MCP Disks and Files (ECP35015)	
3.	MCP Terminal Emulation (ECP35021)	
4.	MCP Task Operations (ECP35014)	
5.	MCP CANDE Editing (ECP35022)	
6.	MCP CANDE Runtime (ECP35023)	
7.	MCP System Operations (ECP35037)	
8.	MCP Introduction to Work Flow Language (WFL) (ECP35009)	
9.	MCP Utilities (ECP35026)	
MCP Database Training		
10.	MCP Enterprise Database Server - Administration and Operations (CEL5021) and ClearPath MCP Enterprise Database Server Data and Structure Definition Language (DASDL) (CEL5027)	$16,371 for an 8-day onsite classroom course.

Depending on the delivery options selected, the *Totals* are:

- Onsite ClearPath MCP Basic Training Tract & Onsite MCP Database Training: $25,040

or

- Web-based ClearPath MCP Basic Training Tract & Onsite MCP Database Training: $20,968

Assumptions

- For on-site training, City of Columbus will need to provide a training classroom. Access to the mainframe system is desired for the hands-on labs or Unisys instructor can use his laptop with Internet access to connect to a Unisys MCP system.
- For web-based training, City of Columbus will need to provide a training environment for student's viewing of the web-based training. The ideal setting would include a room free from outside noise and interruptions. A PC/Workstation will be needed for each student (maximum of 2 students), which is connected to the Internet for projecting the presentation materials,

conducting hands-on lab activities, and a telephone for the audio portion. Unisys will provide access to a remote lab environment to conduct the hands-on lab activities.

- For on-site training at City of Columbus, the instructor's travel expenses are included; classes would be delivered over consecutive business days, Monday – Friday.
- For web-based training, Unisys price is for a maximum of 2 students. An increase in students could increase the proposed durations and prices.
- To enhance the tailored database training, the instructor requests that a copy of the site's DASDL source file be provided prior to scheduling the training so that it can be used as a training tool to further tailor the courses' content to the City of Columbus environment.
- Unisys is not responsible for an individual's response to the training or his/her capacity to learn or to be trained. In addition, Unisys does not warrant that the training provided pursuant to this proposal will meet Client's requirements not expressed in the specifications and Unisys makes no warranties, expressed or implied, as to the results of the training.
- All prices quoted are valid for 90 days from the date of this document.

Additional Terms and Conditions

1. **Warranties**

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE FOR THE USE OR RESULTS OF THE COURSE AND MATERIALS, NOR THAT ANY STUDENT WILL SUCCESSFULLY COMPLETE THE COURSE. UNISYS DISCLAIMS ANY IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AS TO BOTH UNISYS AND NON-UNISYS PRODUCTS ON BEHALF OF BOTH UNISYS AND SUPPLIERS OF NON-UNISYS PRODUCTS.

2. **Termination**

(a) Unisys Termination-Unisys may terminate a Course at any time for any reason without liability to Client. If Unisys terminates a Course after Unisys has confirmed Student's Course enrollment, Unisys will notify Customer of the termination as soon as possible.

b) Client Termination

(1) For open enrollment Courses at Unisys site, if Client does not notify Unisys at least ten (10) business days prior to the course start date that it is terminating its course enrollment, Client shall pay one-half of the course fee.

2) For open enrollment courses at Unisys site, if Client does not notify Unisys at least (5) business days prior to the course start date that it is terminating its course enrollment; Client shall pay the full course fee.

(3) Client shall pay the full course fee for any "No Show" student.

(4) For courses to be held at client's premises, if Client does not notify Unisys at least ten (10) business days prior to the course start date that it is terminating the course, Client shall pay one half of the course fee. If Client notifies Unisys five (5) business days or less prior to the Course start date that it is terminating, Client shall pay the full Course fee.

3. **Limitation of Liability**

IN NO EVENT SHALL UNISYS LIABILITY FOR ANY CLAIMS, DAMAGES, LIABILITIES OR JUDGEMENTS ARISING OUT OF OR RELATED TO THIS AGREEMENT AND CUSTOMER'S USE OF THE TRAINING OR TRAINING MATERIAL PROVIDED UNDER THESE TERMS AND CONDITION EXCEED THE APPLICABLE UNISYS CHARGE(S) FOR THE COURSE OR TRAINING MATERIAL THAT IS THE SUBJECT OF THE CLAIM OR DIRECTLY RELATED TO THE CAUSE(S) OF ACTION ASSERTED. THIS LIMITATION DOES NOT APPLY TO AMOUNTS FOR WHICH CUSTOMER IS INDEMNIFIED UNDER SECTION 4 - "PATENT AND COPYRIGHT INDEMNIFICATION."

All stated charges are exclusive of applicable taxes and expenses, which shall be payable by Client.

Acknowledged and Agreed

	Unisys Corporation	City of Columbus
Authorized Signature:		
Date:		
Name:		
Title:		

Appendix A: Course Content

A tailored version of the material contained in these standard outlines will be delivered and will be relevant to the City of Columbus' Unisys ClearPath MCP environment and database training needs.

Getting Started with the Unisys MCP (ECP35042)

Overview: This session prepares anyone new to the MCP environment to understand the basic concepts of that operating system, its development and direction. It also demonstrates how to install and access the rich documentation sources available to the MCP client base.

Audience: Computer operators, administrators, technical support, programmers, and managers that will be using or managing an MCP server.

Objectives: At the completion of this course, the student should be able to:

- Understand the underlying concepts of the MCP environment
- Identify the major types of MCP server hardware
- Describe the main categories of software used in the MCP environment
- Identify various forms of Unisys MCP Documentation
- Install Unisys CD-ROM Library (CDLib Manager) and Acrobat Reader applications
- Use CDLib Manager to locate documents
- Interpret Railroad Diagrams to construct MCP command or programming syntax

Prerequisites: None. Simple computer concepts would be useful, especially some knowledge of the Microsoft Windows environment.

Key Topics:

- Development of the MCP
- Hardware Overview
- Software Overview
- Documentation sources
- MCP Product Documentation Library CD-ROM installation
- Using the CD-ROM Library application (CDLib Manager)
- Understanding Railroad Diagrams

MCP Disks and Files (ECP35015)

Overview: This instructor-led, web-based session prepares operators, technical support, and system administrators to successfully configure and maintain the MCP disk subsystem. The session is conducted over the Internet with participants learning right at their desks.

Audience: Operators, system administrators and technical support personnel that will be using or managing an MCP server.

Objectives: At the completion of this course, the student should be able to:

- Describe the features of MCP Disk Families.
- Identify the physical and logical attributes of disk storage and how they relate to programming and file storage on disk.
- Use PER, PD, FILES and LFILES system commands to interrogate disks, directories and filenames.
- Describe the Family Substitution concept and how it relates to usage of the MCP system

Prerequisites: Getting Started with the Unisys MCP (ECP35042).

Key Topics:

- Disk Families
- Directories
- File names and titles
- Finding files

MCP Terminal Emulation (ECP35021)

Overview: This instructor-led, web-based session prepares anyone new to the MCP environment to successfully use a Unisys character-based Terminal Emulator.

Audience: Computer operators, administrators, technical support, programmers, and managers that will be using a Terminal Emulator to access a MCP system.

Objectives: At the completion of this course, the student should be able to identify the basic features and purpose for Terminal Emulation software.

Prerequisites: None.

Key Topics:

- Unisys Terminals
- Terminal Emulator purpose
- Third Party Terminal Emulators
- Web Enabler for ClearPath MCP
- Configuration requirements
- Forms mode
- Emulator usage

MCP Task Operations (ECP35014)

Overview: This instructor-led, web-based session prepares operators, programmers, technical support, and system administrators to perform basic MCP operating system commands for monitoring and controlling tasks.

Audience: Operators, programmers, system administrators and technical support personnel that will be using or managing an MCP server.

Objectives: At the completion of this course, the student should be able to perform MCP system commands to monitor and control tasks.

Prerequisites: Getting Started with the Unisys MCP (ECP35042) and MCP Terminal Emulation (ECP35021).

Key Topics:

MCP Terminology
System Command Usage
Commands for task display
Commands for task control

MCP CANDE Editing (ECP35022)

Overview: This instructor-led, web-based session prepares programmers, operators, technical support, and system administrators to use CANDE editing features to maintain records or lines in a source or data file.

Audience: Programmers, operators, system administrators and technical support personnel that will be using or managing an MCP server.

Objectives::At the completion of this course, the student should be able to:

Identify 3 MCP Editors and their benefits

Use CANDE commands to establish a workfile.

Use CANDE commands to edit a workfile.

Use CANDE commands to print and locate files.

Prerequisites: Getting Started with the Unisys MCP (ECP35042), MCP Terminal Emulation (ECP35021), and MCP Disks and Files (ECP35015).

Key Topics:

MCP Editors.

CANDE Help mode.

CANDE commands to establish a workfile.

CANDE commands to enter and view lines in a workfile.

CANDE commands to edit lines in a workfile.

CANDE commands to print, save, recover and remove workfiles.

CANDE commands to locate files and their attributes.

CANDE DO files.

MCP CANDE Runtime (ECP35023)

Overview: This instructor-led, web-based session prepares programmers, operators, technical support, and system administrators to use CANDE to run or compile programs, start WFL jobs and monitor and control their execution. The session is conducted over the Internet with participants learning right at their desks.

Audience: Programmers, operators, system administrators and technical support personnel that will be using or managing an MCP server.

Objectives::At the completion of this course, the student should be able to:

- Compile programs.
- Run programs.
- Start WFL jobs.
- Use File Maintenance WFL statements.
- Monitor and control tasks (compiles, programs and WFL jobs).
- Use BACK utility and PS commands to view and manage Print Requests.

Prerequisites: Getting Started with the Unisys MCP (ECP35042), MCP Terminal Emulation (ECP35021), and MCP CANDE Editing (ECP35022).

Key Topics:

- Compiling.
- Running programs.
- Starting WFL jobs.
- File Maintenance.
- CANDE control commands to monitor and control tasks.
- CANDE control commands for session and miscellaneous information.
- BACK command and PS commands to view and manage Print Requests.

MCP System Operations (ECP35037)

Overview: This instructor-led, web-based session prepares operators, technical support, and system administrators to perform basic MCP operating system commands for monitoring and managing the MCP system. The session is conducted over the Internet with participants learning right at their desks.

Audience: Operators, system administrators, and technical support personnel that will be monitoring or managing an MCP server.

Objectives: At the completion of this session, the student should be able to perform MCP system commands to monitor and control the MCP system.

Prerequisites: MCP Task Operations (ECP35014)

Key Topics:

MCP commands for system monitoring

MCP commands for system control

MCP Introduction to Work Flow Language (WFL) (ECP35009)

Overview: This instructor-led, web-based session prepares operators, programmers, technical support, and system administrators to y create simple WFL jobs to automate their operations.

Audience: Operators, programmers, system administrators and technical support personnel who are responsible for automation in an MCP environment.

Objectives: At the completion of this course, the student should be able to:

- Identify the components of a WFL job
- Create WFL jobs to execute tasks in a set order
- Create WFL jobs to copy files for backup purposes
- Use simple control constructs to monitor jobs

Prerequisites: MCP Basic Training Tract (EPT35027), MCP CANDE Editing (ECP35022) and MCP CANDE Runtime (ECP35023) and/or Introduction to Programmers Workbench for MCP (ECP35024).

Key Topics:

- Overview of WFL
- Constructing a simple WFL Job
- Using WFL Jobs for backup
- Controlling WFL Jobs

MCP Utilities (ECP35026)

Overview: This instructor-led, web-based session prepares programmers, operators, system administrators and technical support staff to use various MCP utilities that aid in programming, operations and support tasks.

Audience: Programmers, operators, system administrators and technical support staff that will be using an MCP server.

Objectives: At the completion of this course, the student should be able to:

- Execute SYSTEM/DUMPALL to perform file and record maintenance functions.
- Execute SYSTEM/FILEDATA to list files and their attributes.
- Execute SYSTEM/LOGANALYZER to obtain task and system activity information.
- Execute SYSTEM/PDIR to obtain file information.
- Execute SYSTEM/SORT to sort data files.

Prerequisites: MCP Basics (ECP35012); MCP Terminal Emulation (ECP35021); MCP Disks and Files (ECP35015)

Key Topics:

- Overview.
- SYSTEM/DUMPALL.
- SYSTEM/FILEDATA.
- SYSTEM/LOGANALYZER.
- SYSTEM/PDIR.
- SYSTEM/SORT.

MCP Database Training

This tailored course would include select topics from the following standard Unisys courseware, which are applicable to the City of Columbus environment.

MCP Enterprise Database Server - Administration and Operations (CEL5021)

Length: 5 days

Objectives: At the completion of this course, the student should be able to update, reorganize, recover, and manage Enterprise Database Server databases.

Audience: This course is intended for database or system administrators and support personnel.

Prerequisites: Knowledge of database concepts, as well as MCP operations.

Key Topics:

Enterprise Database Server (DMS II) components

Control file layout

DASDL updates and reorganization

Halt/Load recovery

Rebuild and rollback operations

Enterprise Database Server utilities

ClearPath MCP Enterprise Database Server Data and Structure Definition Language (DASDL) (CEL5027)

Length: 5 days

Objectives: Upon completion of this course, the student should be able to:

- Create DASDL source to generate a database complete with data sets, sets and subsets
- Establish Data relationships in DASDL to support 1:1, 1:Many, and Many:Many
- Use the DASDL compiler to create a database Description file, used to describe the database for application program compilation
- Create DASDL source to support a database with a variety of physical attributes - FAMILY attributes, AREASIZE, POPULATION, etc.
- Create DASDL source to use a specific data set and set types, and to understand the benefits of each
- Provide for data item and record level security using logical views of the data
- Determine the steps involved in each type of database update, and to identify which updates cause database reorganization

List the phases of the design process for new databases

Understand the process of normalization, and how to decide what datasets are required, and where to place data items

Create DASDL source that takes advantage of Enterprise Database Server Extended Edition features

Audience: This course is intended to teach both programmers, who will use COBOL to read from and update Enterprise Database Server databases, and database administrators.

Prerequisites: Basic MCP operations skills and the ability to use CANDE or Programmers Workbench for editing and compiling are required.

Key Topics:

DASDL

Data and index structures

REMAPs and logical databases

Options, parameters and defaults

Reorganization

Data Base Design considerations

Enterprise Database Server Extended Edition