Curriculum Vitae of: **Pierre Fichaud**

Confidential

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LANGUAGES: French – spoken, written

 English – spoken, written

SUMMARY: Over 40 years’ experience in the development and maintenance of business applications and system software primarily on z/OS

 Ability to work on complex applications

 Superior problem-solving skills

 Strong communication skills

 Team player

 Ability to cope under pressure

 Strong analytical skills

 Performance and tuning expert

SPECIALTIES:

* using multi-tasking, the development of scalable software to handle very high volumes
* highly efficient exits with very short code paths
* cross-memory services of any kind
* dump analysis using IPCS
* easy-to-read and well-documented program code
* programming with performance in mind

KNOWLEDGE:

* HLASM and macro language
* BSAM, QSAM, BDAM (keyed also), BPAM (PDS and PDSE)
* I/O internals and control blocks (DCB, DEB, IOB, DSSB, UCB, IOQ, IOSB)
* Allocation (SVC 99), DSAB,SIOT,JFCB,SWAREQ (X-memory flavor)
* VSAM control blocks (ACB, RPL, AMBL, AMB, EDB, MMIB, etc)
* Z/OS internals and control blocks
* Memory management (GETMAIN/FREEMAIN, STORAGE, CPOOL) all linkages, 24-bit, 31-bit and 64-bit
* 64-bit memory (IARV64, IARCP64 and IARST64)
* X-memory services (SRBs, secondary-space mode, AR mode, MVCP,MVCS, common storage)
* Multi-tasking (ATTACHX, DETACH, CHAP, STATUS)
* Synchronization (WAIT/POST, SUSPEND/RESUME, STATUS) all linkages
* Data-spaces and access-register mode
* Authorization (JSCBAUTH, key 0,supervisor state, EAX)
* PC routines (cp, ss)
* Recovery (ESPIE, ESTAE, ESTAI, FRR, ARR)
* SDUMPX with SYMREC (SYMRBLD)
* Sub-system interfaces (SSCT, SSVT) and sub-system exits (end-of-task, end-of-memory)
* Timer and dispatcher DIEs
* Serialization (ENQ/DEQ, SETLOCK, CS/CDS, PLO)
* Load modules (JPA, nucleus, LPA, control blocks) – PDS load module analysis, PDSE module analysis using IEWBIND
* Exits (IEAVADUS, IEFUSI, IEFACTRT, JES2 exit 6,MQ message exit, SMF type 14, 18, 30)
* Dynamic code/exit implantation and activation
* z/OS and CICS resource managers
* 64-bit instructions, programming and addressing mode
* Linkage stack navigation, both formats
* SYSPLEX messaging services (IXCJOIN, IXCMSGO, etc)
* REXX functions in assembler
* Many authorized and unauthorized APIs and macros
* Dump analysis using SYSUDUMP, SYSABEND and IPCS(SVC dumps SYSMDUMP)
* System trace table, logrec analysis, SLIP traps
* GTF tracing
* PL/1,C,FORTRAN, COBOL, LE
* REXX, CLST, ISPF dialogues, TSO/E
* MQSeries
* Expeditor, Intertest, TraceMaster, HLASM toolkit, XDC
* TCP/IP and SSL socket programming in C, SSL APIs, TCPIP component tracing
* TCP/IP socket programming in assembler
* ICSF (cryptography), DES keys, control vectors, ICSF API calls, key importing and exporting, PIN functions, MAC generation, SHA, AES, EMV
* SSL certificate generation and management, Certificate Management Services APIs
* Generation, export and import of certificates and certificates/private keys
* USS key databases, gskkyman, RACF callable services (R\_datalib)
* Conversion from SAS/C to IBM/C
* DFSMShsm, FDRABR (ARC), ARCHRCAL, ARCHMIG
* VTOC manipulation (keyed-BDAM or CVAFDIR)
* Data Loss Prevention (DLP)
* Secure data remediation
* EAV (Entitlements Access Validation for RACF)

EXPERIENCE:

2009/08-current **Company confidential**, San Jose, CA - Product Architect

* Implementation of SSL for the z/OS portion of a product
* Debugging of the SSL communications with the PC portion of the product
* Creation, import and export of certificates/private keys using the CMS (Certificate Management Services) APIs
* Designing multi-threaded applications
* IPv6 support in C
* Secure data remediation
* Entitlements Access Validation (EAV)

zOS, ISPF, TSO, assembler, LE, POSIX, IBM/C, batch, JCL, TCP/IP, SSL, X.509 certificates, AT/TLS, LE, REXX, ISPF dialogs

2011/04-2011/12 **TreeHouse Software**, Sewickley, PA - Senior Product Analyst

* Front-line support for the company’s flagship product written in C and assembler
* Solving abends and production issues with a worldwide customer base
* Conversion of the C code base to conform to ANSI standards

zOS, ISPF, TSO, assembler, LE, IBM/C, batch, JCL, TCP/IP

2009/06-2013/09 **Company confidential**, Nantes, France - Senior Assembler Analyst

* Conversion of a SAS/C application running under TSO/ISPF to IBM/C
* Recompiling and linking of C programs using IBM/C
* Replacement of SAS/C functions with equivalent IBM/C functions
* Development of new IBM/C functions in C and assembler to replace the SAS/C functions having no equivalence in IBM/C
* Debugging the application with supplied test scripts
* Porting z/OS assembler to Micro-Focus COBOL for Linux

zOS, ISPF, TSO, assembler, SAS/C, IBM/C, batch, JCL, GTF

2008/04-2008/11 **Data Kinetics**, Ottawa, ON - Senior Assembler Analyst

* Fixed bugs in z/OS database package for new release of product
* Development of test cases to break the product
* z/OS and CICS resource managers
* fixing bugs related to 24 and 31-bit mode
* production of a marketing ideas document and an architecture/re-engineering document

zOS, ISPF, TSO, assembler, COBOL, batch, IMS, CICS, DB2 stored procedures, JCL, REXX

2006/03-2008/02 **Caisse Populaire Desjardins**, Montreal, QC - Senior Assembler Analyst

* Involved in the implementation of Smart-Card processing at the mainframe end
* Development of environment and language independent APIs in assembler to perform cryptographic calls using ICSF APIs
* Development of cryptographic utilities for PIN encryption and translation, ARQC/ARPC generation, scripts, importation of 3DES keys in the HOGAN system
* Gained extensive knowledge of symmetric (3DES) cryptography
* Have learned about asymmetric cryptography (RSA)
* Learned about EMV and VISA smart-card software interfaces
* Made changes to programs that interfaced with DB2 using SQL statements

zOS, ISPF, TSO, assembler, COBOL, IMS, JCL, Endevor, ICSF, DB2/SQL, HOGAN

2005/09-2006/02 **Equifax**, Montreal, QC - Senior Assembler Analyst

* Made changes to the core application (address inquiry and update) to add historical address data to an ADABAS database

zOS, ISPF, TSO, assembler, COBOL II/III, CICS, Expediter, JCL, Endevor

2004/10-2005/09 **Nastel Technologies**, Long Island, NY - z/OS Product Architect

* Developed a product to capture batch/TSO, CICS and IMS MQ calls.
* MQ contextual data and part of the MQ message data were written to SCOPE=ALL data-spaces.
* An authorized STC was developed. Among MVS features used were CSA, global name/tokens, secondary-space and access register mode, multi-tasking, locking (ENQ/DEQ, PLO, CS, CDS), PC routines, authorized APIs.
* The product is scalable allowing for a variable number of sub-tasks and data-spaces for the capture and eventual transmission of MQ data. The system is designed for high-volumes of MQ data and high-velocity applications.
* Built-in logging and tracing facilities

zOS, ISPF, TSO, assembler, macros, JCL, operating system internals, authorized services, IPCS, 64-bit programming

2004/02-2004/09 **ThinkQuick Software**, Toronto *-* Senior Software Developer

* Using SMF records (types 14 and 18), developed a utility to compare PDSs containing JCL and extract those members that were changed.
* Members are either PROCs or JOB streams.
* All combinations of changed JOBs or PROCs were submitted to JES2 via the internal reader.
* JCL cards were intercepted by a JES2 exit (#6) and the relevant fields from various JOB, EXEC and DD cards were stored in a dataspace and subsequently written to a file. Cross-memory services were used (access-register and secondary-space mode).
* File was used to update a relational database used by the mainframe operations center.

zOS, ISPF, TSO, JES2 exits(#6), assembler, macros, JCL, operating system internals, SYS1.PARMLIB, SMF, HLASM Toolkit Debugger, IPCS, 64-bit programming, REXX

2003/09-2003/11 **MVS Solutions**, Toronto – Senior Software Developer

* Developed an SMF extraction utility that compared the effect of ThruPut Manager on a JOB’s input queue wait times and execution times.
* Two SMF files were compared using SMF type 30 records.

 zOS, ISPF, TSO, assembler, macros, JCL, SYS1.PARMLIB, SMF, IPCS

2000/06-2003/09 **Company Confidential**, Toronto – z/OS Product Architect

* Principal architect and developer for a performance analysis tool (PSW sampler) marketed as FreezeFrame by Macro4 and APA by IBM.
* In-depth knowledge of MVS control blocks for I/O, memory, address-space management and task management needed.
* 64-bit programming required.

OS/390 and ZOS internals, ISPF, TSO, assembler, macros, JCL, MVS exits (IEFUSI, IEFUJI, IEFACTRT), X-memory services, SRBs, DIEs, SVC dumps, SLIP traps, SYSABEND/SYSUDUMP, system trace table, LOGREC entries, data spaces, authorization, locking, SYSPLEX services, IPCS, linkage stack, 64-bit programming

1999/12-2000/03 **InCert Corporation**, Cambridge, Massachusetts – Senior Software Developer

* Developed a batch abend analyzer that displayed contextual information, abending module information, save area and linkage stack trace, in-depth analysis of the abend, registers at time of abend, load module maps (PDS or PDSE).
* Abend was intercepted in exit IEAVADUS (IGC0905A).

 OS/390 internals, ISPF, TSO, assembler, macros, JCL, MVS exits (IEAVADUS)

1998/06–1999/11 **IBM Global Services**, Montreal – Software Developer

* Converting Air Canada's MSS (Message Switching System) to run in 31-bit mode.
* Increased the capacity of the DL/I database because of increased message volumes (more airline traffic).
* Dataspaces and PDSEs used to store messages for later retrieval in order to assist online support for the system.

OS/390 internals, ISPF, TSO, assembler, macros, JCL, IMS DB/DC, MQSeries, VTAM, PL/1,Endevor

1994/04-1998/**03 CANAC International** (CN subsidiary), Montreal – Software Developer

* Part of a small team re-sizing CNs mainframe railroad system (TRACS) to run China's railroad.
* Volumes and sizes expected to be from 20 to 200 times CNs current values.
* Messaging converted to use MQSeries to connect with about 1700 OS/2 servers in the field.
* Converted the CICS front-end (Assembler) from 1.7 to 3.3 to 4.1.
* Extensive use of SVC screening, data spaces, PC/PR instruction concepts, 31-bit module/data placement and code execution.
* System has its own internal control block structure, dispatching, scheduling, data management, etc.
* Knowledge of MVS internals.
* SAS/C for MVS was used to build automated statistics record capturing system for the application area.
* System delivered in January 1998 in Beijing on the first commercially available OS/390 on the planet.

MVS/ESA internals, OS/390 internals, ISPF, TSO, assembler, macros, JCL, CICS, MQSeries, SAS/C

1980/01–1994/04 **CN Rail**, Montreal – Senior Programmer/Analyst

* Developed CICS and IMS DC modules (Assembler) to allow application modules to queue messages for CNs Router, a profile-driven message switcher.
* Worked in TRACS (Traffic Reporting and Control System) using Assembler and TOPSTRAN.
* Supported the in-house application database.
* Lead on-call support person.
* Technical lead for a group of 40 people.
* Developed a decision table system that reduced complex programs to tables that were easy to modify and promote.
* Developed and implemented data compression/decompression for application files.
* Built the development and testing environment for applications using REXX, CLST and ISPF Dialogue facilities.
* Developed a dynamic ISAM using BDAM having keyed (full or partial keys), or sequential access (forward/backward), multiple key files and variable length or non-existent data records.
* Converted the TRACS application to run in 31-bit mode.
* In-house application database was converted from 3350s to 3380s to 3390s.
* Wrote a release management package in REXX.
* Developed PANVALET interfaces tied to the development and testing environments.

MVS/XA, MVS/ESA, assembler, TOPSTRAN, macros, COBOL, TSO, ISPF, JCL, Panvalet, REXX, Clist

 1988 **Dawson College**, Montreal – Teacher (part-time)

* Taught 'Introduction to C Language' using Borland C.

 1980 – 1986 **Dawson College**, Montreal – Teacher (part-time)

* Taught “IBM 370 Assembler Language Programming” at the introductory, intermediate and advanced levels.

 1978/04–1979/12 **I.S.T**., Montreal – Systems Programmer

* Did PTF research, SVC dump analysis and refits of in-house mods.
* Solved user MVS problems and supported FDR/DSF.

MVS, assembler, JCL, ISPF, TSO, Clist, FDR/DSF, COBOL, FORTRAN, PL/1

 1977/12-1978/03 **Institut de Recherche Psychologique**, Montreal – Programmer/Analyst

 1977/09-1977/11 **Computer Institute of Canada**, Montreal - Teacher

* Taught FORTRAN, assembler, PL/1, JCL, utilities, COBOL and systems analysis.

 1976/07-1977/08 **Cogebec**, Montreal – Programmer/Analyst

EDUCATION: Dawson College, Montreal, DEC in Pure and Applied Science