

# Curriculum Vitae

[\(PDF-Version\)](#)  
[\(German Version\)](#)

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**Email:** [michael@soliman.de](mailto:michael@soliman.de)  
**Date of Birth** 2/5/1968  
**Nationality** German  
**Marital status** Married.



**Objective:** To offer IT-training and consulting-services.

## Qualification highlights:

- Microsoft-Certified-Trainer since 1998, continual training-experience in the Microsoft, Linux and Embedded-Linux world.
- Applicant, inventor and co-owner of a leading-edge measurement-data-acquisition and storage technology-patent for large chemical plants.
- Consulting specialist in designing and optimising high-performance and failsafe database-environments for SharePoint and ERP systems.

## Training- Experience

MCT-Certification ([List of Trainings](#))

**since 1998**

Windows NT and Office-teachings

**1998**

IT-Training in Windows, Word, und standard-applications at the VHS  
Darmstadt/Dieburg

**1994-1997**

## **Consulting- Experience**

Presentations in German and English as well as coaching regarding expert knowledge and general introductions and guidance of groups of developers and administrators in solving business-critical project-development problems (including smooth introduction of new technologies/design-structures).

**since 1998**

- The spectrum of guidance-topics comprised for example:
  - [MSF/MOF](#) based working-group-design in planning and implementing large Active-Directory-Farms.
  - [MSF/MOF](#) based working-group-design in planning and implementation of security-solutions for large-scale enterprise-networks.
- The spectrum of hardware-specific topics comprised for example:
  - Conceptual design of fail-safe enterprise-networks for/in group-work with enterprise- administrators, as well as the following implementation/installation.
  - Attendance of and introduction to simple Windows measurement-data-acquisition-stations for inexperienced and well experienced audiences (crash-/extension courses).
  - Composition/Attendance of server-systems/database/measurement-data management-systems ([SCADA](#)) for operating large chemical plants.
  - Composition of network-, web-server-, firewall-infrastructures.
- The spectrum of software-specific topics comprised for example:
  - Windows- and Linux-based development in C/C++, C++/CLI as well as C#/VB.NET for the .NET-Frameworks 1.1-4.5 (Windows only).
  - Database-programming in Oracle/Informix/MySQL as well as MS-SQL-Server 2000 to 2017 (new) in C/C++, C++/CLI as well as C#/VB.NET.
  - .
  - Database-administration for MS-SQL-Server 2000 to 2017 (with extensive practical in field of medical practices).
  - Microsoft BizTalk 2006R2 to 2016 solutions.
  - Microsoft SOL Server 2000 to 2017 Reporting Services solutions.
  - SharePoint 2003 to 2017 Webpart-programming as well as administration and Performance-optimisation.
  - BizTalk 2006-2013R2 programming/administration.
  - Web-Service-Software-Factory and Windows Communication Foundation programming.
  - Modern forms of measurement-data- analysis.
  - Implementation of Microsoft Windows/Linux based networks.
  - Teachings in Office-VBA-programming as well as professional handling of self-updating calculations in Winword-documents-format-templates- and directory-management.
  - Windows- and Linux-based inter-process-communication.
  - Windows (95 to 10), as well as. Embedded-Linux and Network-Administration-courses.

**Project-  
Experience**

Development of a measurement-procedure for passenger-car-Hydrogen-Gas-stations in collaboration with Technical University of Darmstadt und

**2017-**

der Esters Electronics GmbH:

- Research and construction of stable measurement-functionals for sensor-data with Signal-Noise-ratios  $\ll 1$  using Mathematica 11.1.
- Simplification and redesign des process in C++ in order to run on a signal-processor-platform.

Using the PlantScope-Compressions-Patents „[DE 10021282 B4](#)“/„[DE 10021286 B4](#)“ (German), „[EP 1301993](#)“ (European) and „[United States Patent #6,839,003](#)“ for the analysis of production-data at Clariant and InfraServ on the Industry-Park Frankfurt-Hoechst for the support-contactor ATEG/Eschborn in order to establish a reporting of the batch-protocols and the alert-creation. **2017**

- The Consulting/Implementation did comprise
  - Calculation of von Action-Functionals, like integrals of current-flows and spent energies, directly using the data compressed by a factor 100, i.e., without prior decompression,
  - Generating high-dimensional measurement-space alert-zones (meaning that not just the measured values themselves, but compressed-data relations of measured values exceeding thresholds generate the alerts).

Complete GO-Live-Redesign of a BizTalk-Farm at a globally active health- **2015-**  
insurance company in Luxemburg. Including:

- Creation and Management of BPMN-2.0-conformant Business-Process-Plans for Health-Insurance-Policy-Management, Document-Management and Interconnectivity with Banks.
- Revision of existing Process-Implementations and Implementation of new ones in BizTalk-2013R2 (Microsoft-Middleware).
- Release/Deployment-Management.
- Test-Management for all Middleware-Processes in [Team-Foundation-Server](#) (Policy-Investigation, Document-Management, Payments, ...)

Application of a Patent for Multi-Layer-Thermo-Sensors. **2014**

Implementation of a SharePoint-2013-Enterprise Farm for NETWORK PEOPLE AG (<https://networkpeople.de>) including BI-Dashboards using [SQL-Server-Reporting-Services](#), [SQL-Server-Power-Pivot](#) and Data-Ware-Housing with [SQL-Server-Integration-Services](#). **2014**

Extension of a WCF-host for querying coolant-compressor-modules from native, non-COM DLLs to a Caching-System, reducing the loading-times from 15 minutes to 6.5 seconds for a large refrigeration-manufacturer at [intera GmbH](#). **2014**

Implementation of a WCF-host for querying coolant-compressor-modules from native, non-COM DLLs for a large refrigeration-manufacturer at **2013**

[intera GmbH](#).

Implementation of a WCF-host for querying coolant-compressor-modules from native, non-COM DLLs for a large refrigeration-manufacturer at <a href="#">intera GmbH</a> .	<b>2013</b>
Implementation of a SharePoint-2013-Managed-Metadata-Service-Taxonomy-System for an insolvency-firm.	<b>2013</b>
Securing an ASP.NET Web-Platform for the international Catalyst-Metal Recycler & Dealer <a href="#">Duesmann &amp; Hensel Recycling GmbH</a> .	<b>2013</b>
Provision and Troubleshooting of SharePoint-Farms for Team-Workflowing for several liquidator-offices.	<b>2013</b>
Conceptual Design, Documentation, Coordination and Implementation of the encryption of a SharePoint 2010-Documentation-Farm via <a href="#">Transparent Data Encryption</a> for Bayer AG/Leverkusen.	<b>2013</b>
Maintenance of a SharePoint 2010- Documentation-Farm and implementation if a Wiki/Support-Infrastructure for a local energy-, gas-, and water-supplier including the accompanying reporting using <a href="#">SQL-Server-Reporting-Services</a> .	<b>2011-2013</b>
Conceptual design and implementation of the accounting- and reporting-environment of a large aircraft-fuel-provider.	<b>since 2010</b>
- The feature-spectrum comprised for example <ul style="list-style-type: none"><li>• Conceptual design and implementation reports based upon <a href="#">Reporting Server 2005/2008 R2/2014</a> as well as <a href="#">SQL-Server-Analysis-Services 2014</a>,</li><li>• Design of a failsafe infrastructure based upon two independent hardware-sites,</li><li>• Team-redesign of available functionality in the accounting-system.</li></ul>	
- The feature-spectrum comprised for example <ul style="list-style-type: none"><li>• Conceptual design and implementation reports based upon <a href="#">Reporting Server 2005/2008 R2/2014</a> as well as <a href="#">SQL-Server-Analysis-Services 2014</a>,</li><li>• Design of a failsafe infrastructure based upon two independent hardware-sites,</li><li>• Team-redesign of available functionality in the accounting-system.</li></ul>	
Conceptual design and implementation of a SharePoint 2010 Farm for a local energy-, gas-, and water-supplier.	<b>2010</b>
Conceptual design, planning, management if the development-department	<b>2010-2013</b>

and implementation of a data-acquisition-interface for an autonomic measurement-data-acquisition-system for Embedded-Controller-Systems [GDR 14xy](#).

- The feature-spectrum comprised for example
  - Design of a data-acquisition-interface for a [Datacommunication / Datalogger-System](#) of [Esters Elektronik GmbH](#),
  - Design-requirement: To load the data at least 10-times faster than an existing data-acquisition-system,
  - Realisation of the interface bases upon [C++/Boost C++/DMA](#) utilising a strong [Barton-Nackman](#) design, being free of virtual function-calls (except for the Boost-library and Windows itself, of course),
  - Result: 600-fold performance-gain with respect to the .Net based existing data-acquisition-system's performance.

Conceptual design and development of a Portal Software for a load-carrying-equipment machine-manufacturer at Frankfurt Airport based upon SharePoint 2007.

**2008-2009**

- The feature-spectrum comprised for example
  - Conceptual design and planning of the portal's requirements
  - Installation, implementation and configuration of SharePoint 2007
  - Recording of specific requirements
  - Development and debugging of specific requirements into the Webparts
  - Implementation of Webparts in the portal-environment
  - customization and individualization of the Webparts
  - Products: Windows Server 2003, SharePoint MS SQL Server, .Net 3.0 u. 3.5.

Conceptual design and development of an active Wiki-Site-Structure in a SharePoint 2007 environment.

**2008-2009**

- The feature-spectrum comprised for example
  - Conceptual design and planning of the data-link-structure based upon the capability of SharePoint-Webparts (in contrast to ASP.NET-Webparts) to be connected across page-boundaries
  - Maintenance and customization of created Sites with active Wiki-Site-Structure via sole use of SharePoint-Designer onboard-tools
  - Diagnosis and resolution of several SharePoint-Designer-implementation-specific problems
  - Implementation of Webparts in the portal-environment solving authentication-problems
  - Products: Windows Server 2003, SharePoint Server 2007, MS SQL Server 2005, Visual Studio 2008, .Net 3.5.

Conceptual design and development of an internationalised contract-sales-platform incl. a web-portal for a large price-search-engine-operator in the energy and telecommunications sector ( <a href="http://verivox.de">http://verivox.de</a> ).	<b>2008</b>
<ul style="list-style-type: none"> <li>- The feature-spectrum comprised for example <ul style="list-style-type: none"> <li>• implementation of a demo-version based upon <a href="#">Biztalk 2006/SharePoint 2007</a> with <a href="#">Business-Data-Catalog-</a> and <a href="#">Workflow-Foundation</a>-support (dropped for licensing-reasons),</li> <li>• an integrates price-search-engine based on a secure back-end-assembly logic directly implementing the price-optimisation/-search into the SQL-Server-Back-End,</li> <li>• a hierarchical geo-database supporting structure of the price/contract-database,</li> <li>• a database structure supporting tracing of shareholding-relations of the contracting parties,</li> <li>• Integration of the aforementioned technologies based upon the Web-Service -Software-Factory.</li> </ul> </li> </ul>	
Conceptual design and development of specific web-applications und Webparts under SharePoint 2007 as well as BizTalk 2006 for NETWORK PEOPLE AG ( <a href="http://networkpeople.de">http://networkpeople.de</a> ).	<b>since 2007</b>
Training of optimisation of SQL Server 2000/2005 systems as well regarding the server-design as the query-structure.	<b>since 2006</b>
Training of .NET 2.0/C# 2.0 incl. interface-programming between Win32/SQL 2000 und .NET 2.0 with special emphasis on new features and performance-optimisation in C# 2.0 und .NET 2.0.	<b>since 2006</b>
Conceptual design and development of SharePoint-specific database-extension-modules under C# 2.0 incl. interface-programming between Win32/SQL 2000 und .NET 2.0 in <u>both</u> directions (incl. solving the stability problems common to this type of work) for NETWORK PEOPLE AG ( <a href="http://networkpeople.de">http://networkpeople.de</a> ).	<b>since 2006</b>
Training of SQL Server 2000/2005 administration as well as programming with special emphasis on security/encryption and fail-safety.	<b>since 2005</b>
Conceptual design and development of SharePoint- web-applications as well as Webpart-development incl. modification of the internal database-logics via ADO.NET for NETWORK PEOPLE AG ( <a href="http://networkpeople.de">http://networkpeople.de</a> ).	<b>since 2005</b>
Conceptual design and Optimisation of high-performance data-processing and graphics-element compilation for credit-card-printing-machines.	<b>2003-2004</b>
The patents, „ <a href="#">DE 10021282 B4</a> “/„ <a href="#">DE 10021286 B4</a> “ (German), „ <a href="#">EP 1301993</a> “ (European) and „ <a href="#">United States Patent #6,839,003</a> “, resulting from the aforementioned work have been granted within the adjoining time-	<b>2000-2007</b>

span without restrictions on our substantial claims.

Conceptual design and development of an adaption of the compression-algorithm to the structure of noisy, coarse-grid long-term-[ECG \(Electro-Cardio-Gram\)](#)-data.

since 2002

Electro-cardio-grams are memory-intensive utilising the shipping of tapes or flash-sticks. An Internet-bases data-acquisition-system helps in reducing the total cost of equipment ownership.

- Classification of mathematically und physically relevant literature.
- Conceptual design and development of a transformation allowing to use the aforementioned compression-algorithm.
- Implementation of the signal-processor-support on Intel/AMD based systems.

<b>Operating-Systems:</b> Windows NT 4SP6a (Workstation or. Server) up to Windows 2000.
<b>Development-Environment:</b> Mathematica 4.x, Winword from Version 9 (2000) on, Mathematica-Wavelet-Explorer from Version 1.x on, Visual-Studio 6.

Authoring of a German as well as an International patent, planning as well as contact- and enquiry-treatment by and with respect to the "[Deutsches Patent- und Markenamt](#)" resp. the "[Europäisches Patentamt](#)".

since 2000

The patent on the aforementioned compression-technology was granted without restrictions on our claims.

- Classification of patent-relevant and technically relevant literature.
- Authoring of the German patent-application.
- Filing and Design of a rights-administration-model.
- Clearing out of the reviser's objections (All objections were referring to the newness have been dropped without mitigation of the claims.
- Authoring of the international patent-application including an extension comprising a method to display and evaluate the compressed data directly, hereby using the patent's capability to "boil down" the data to its essential information and identify this essence, e.g. by creating hand-like structures in the views of compressed Electro-Cardio-Gram-data with the fingers pointing to the arrhythmic points in time.
- Removal of purely formal shortcomings ( Figures' formats, partitioning of maps, photographic reproduction).

<b>Operating-Systems:</b>
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Windows NT 4SP6a (Workstation or. Server) up to Windows 2000.

**Development-Environment:**

Mathematica 4.x, Mathematica-Wavelet-Explorer Version 1.x, Visualcafe from Version 3.x on, Cosmo-Player for Netscape from Ver. 4.7 on.

since 1999

Conceptual design, Installation and programming of a web-based Acquisition-, Compression- und Remote-Query-System on undemanding/low-end hardware of Measurement-Data fit for data-archiving according to the German product liability law, for Clariant Deutschland GmbH, and Infraserv GmbH & Co. Hoechst KG (See [www.PlantScope.de](http://www.PlantScope.de), Demo under [Alopex.de](http://Alopex.de): Username und Password „demo“).

Port/Enhancement of Database-Integration from Oracle 8.1.x to MS-SQL 2000/2005 as well as MySQL Ver. 5 to 6.0.9.

The system acquires and administrates measurement-data in conformance with the German Product Liability Act, i.e. for 10 years (normal case) to 30 years (hazardous incident). State of the art measurement-data-acquisition comprises, per plant, 500-1000 sensor-probes, which deliver a measurement-value any 1-2 seconds resulting in 250-500 MB per sensor and year being held online on a web-retrievable basis.

Without the compression system, querying sensors, which embrace a time span of year (daily practice), would fully load the system at only about 40 sensor-queries per day:

With activated compression the system stems about 100000 sensor-queries per day.

Without the compression an expensive Data-Warehouse-Server would to be required.

With activated compression a usual Laptop will suffice [Necessary are about. 18GB/year for 700 sensors with 15s sampling-rate and an average of 1% approximation-error. Nevertheless, for safeguarding against failure, we recommend [RAiD](#)-Systems with [RAiD](#)-Levels 1(0), 5(0) or 6(0) resp. 7 ].

The system handles all necessary administration-tasks by utilising a standard Web-Browser (IE from Ver. 5.5 on with Java-Option installed, Netscape from Ver. 4.7 on, Mozilla from Ver. 1.3 on, Firefox from Vers. 1.8. on, as well as Java 1.4 or above installed).

Tasks performed in order to fulfil any and all scientific as well as technical standards:

- Classification of mathematically und physically relevant literature.
- Conceptual design and development of a web-based measurement-data- analysis and integration with an Online- Database (Oracle from Ver. 8.1.5. on SQL-Server from Ver. 7/2000 on, MySQL from Ver. 5 on.).
- Definition, programming and design of an update-model of the compressed database-tables as well as the inter-



process-communication-interfaces (Acquisition-Server, Database, Web-Server, Java-Applet). Java-Implementation helped and instructed by a companion.

- Development, proof of safety and stability and test (later patent-application) of the compression-algorithm [The average All-Database-Compression-factor lies at about 100 (average compression-error at 2% with respect to the  $l_2$ -measure), excluding 10 Sensors with an extraordinarily low Signal-to-Noise-ratio of about 1:2 (looking like white noise by visual inspection).].
- Implementation of the compression-algorithm on two independent platforms (o the one hand Mathematica 4.x, the other hand Visual C++6/7 as well as Intel C++ 5/6) along with a cross-consistency-test.
- Two months long term testing-phase With 1000 to 5000 data-acquisitions as well as 50000 to 100000 randomised data-query-actions per day.
- [TÜV](#)-Certification.
- More than 8.6 years of data-loss-free operation-time.

<p><b>Operating-Systems:</b></p> <p>Windows NT 4SP6a (Workstation or. Server) up to Windows 2008: customer's choice.</p>
<p><b>Further Server-Components:</b></p> <p>SQL-Server from Ver. 7/2000 on (needs Windows Server), Oracle from 8.1.5., MySQL Ver. 5.0.20/6.0.9., Apache from Version 1.3 on.</p>
<p><b>Clients:</b></p> <p>IE from Vers. 5.5 on with Java-Option installed (not shipped with IE, to be downloaded from <a href="http://java.com/download">java.com/download</a>), Netscape from Ver. 4.7, Mozilla from Vers. 1.3 on, Firefox from Vers. 1.8. on (Opera was not excessively tested.).</p>
<p><b>Development-Environment:</b></p> <p>Mathematica 4.x, Mathematica-Wavelet-Explorer Version 1., Visualcafe from Version 3.x on, Microsoft Visual Studio, Microsoft Visual C++ 6/7 on, Intel C++ 5/6, Microsoft Visual SourceSafe 6.</p>

- Installation and administration of a Windows NT 4 domain/sub-domain structure ( 2 Main-Domain-Servers, 4 Sub-Domains ) **1997-1999**
- Migration to Windows NT 4 ( 2 Servers, 15 Clients ) **1996-1999**
- Hardware-Installation and administration of a departmental LAN: **1994-1999**

	Installation and administration of a TCP/IP-LAN: Sun ( BSD-Unix ), Silicon Graphics ( System V-Unix )	
	Installation and administration of a Windows 3.1 LAN ( 9 Peers )	
	Migration ( from Windows for Workgroups 3.11 ), Installation and administration of a Windows NT 3.51 LAN ( 2 Servers, 10 Clients )	
	Adaptation of drivers and remote printer-spoolers under Sinix	<b>1992</b>
	Creation of an interactive teaching-programme for apprentices on numerical Integration	<b>1989-1990</b>
<b>Occupational Activity</b>	IT-Organisation and Programming tasks as free-lancer for diverse companies  free-lancer IT-Trainer	<b>since 1992</b>
	Photographical und data processing-conditioning at the Repro-Studio Leist in Groß-Zimmern (Germany)	<b>1993-1994</b>
	Delivery of goods for “Hermes” in Dieburg (Germany) on behalf of Otto-Shipping in Hamburg (Germany)	<b>1990</b>
<b>Promotion</b>	External Promotion at the “Deutsches Kunststoff-Institute”, Topic: "Wavelet- und $\Delta$ -compressed Hamiltonoperators."	<b>since 1995</b>
<b>Academic Studies</b>	Mathematics at “Technische Hochschule Darmstadt” now “Technische Universität Darmstadt” (i.e. Technical University Darmstadt)	<b>1988-1997</b>
	Physics at <a href="#">“Technische Hochschule Darmstadt”</a> now <a href="#">“Technische Universität Darmstadt”</a> (i.e. Technical University Darmstadt)	<b>1988-1994</b>
	Graduation: Diploma in 12 Subject-Semesters with <u>Grade A</u> <u>Topic</u> <u>"Numerical Desmearing of small-angle-x-ray-scattering photographs".</u>	<b>August 1994</b>
<b>Military Service</b>	Communications and Medical specialist at the 3.rd army corps.	<b>7/1/1987-9/30/1988</b>
<b>Education</b>	Internship at <a href="#">Schneller</a> 's in Kent/Ohio.	<b>autumn 1989</b>
	Max-Planck-High School ( in Groß-Umstadt/Germany )	<b>1980-1987</b>
	Graduation: University-Entrance Diploma with	

Grade A- = 837/900 points.

<b>Languages</b>	Fluent in spoken and written form as well as a language of instruction (whole courses):	English
	School knowledge:	Latin

**Additional skills**

**Personal interests** Ancient history, medicine ( neurology and biochemistry ), epistemology.

**Recent achievements** Expiration of all opposition-periods regarding my patents.

Darmstadt, 4/27/2009.

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