**Swart, Calvin B (Cal)**

IBM Senior Technical Staff Member, Cal Swart, joined IBM Research in the fall of 1982. Since then he has worked on a variety of projects ranging from object-oriented toolkits, handheld applications, and nextgen web applications.

See profile at http://researcher.watson.ibm.com/researcher/view.php?person=ibm-Calvin.Swart

**Current and Prior Positions**

IBM Retiree Supplemental
2016 - present

IBM Research
Staff
1982 - 2016

Com/Energy
Programmer / Systems Programmer
1974-1982

Honeywell
Electronic Technician
1972-1974

US Air Force - Sergeant
Radio Repairman
1970-1972

Air Force Reserves - Sergeant
Radio Repairman
1972-1976

**Publications**

Retrospective validation of the laparoscopic ICG SLN mapping in patients with grade 3 endometrial cancer
Perceptions of Risk in Mobile Transaction
Productivity in parallel programming: A decade of progress
A decade of progress in parallel programming productivity
An open source approach to information scent
Physical Accessibility of Touchscreen Smartphones
Perceived Security Risks in Mobile Interaction
Exploring pinch and spread gestures on mobile devices
An Open Source Approach to Information Scent
Perceived Security Risks in Mobile Interaction
Exploring pinch and spread gestures on mobile devices
Physical Accessibility of Touchscreen Smartphones
Sketching Data: Lessons Learned From a Formative User Evaluation
Wii remote as a web navigation device for people with cerebral palsy
Biometric Authentication on a Mobile Device: A Study of User Effort, Error and Task Disruption
SketchGraph: gestural data input for mobile tablet devices
Understanding the role of age and fluid intelligence in information search
Age-specific predictive models of human performance
Reactive information foraging: an empirical investigation of theory-based recommender systems for programmers
Sketching Tools for Ideation
Sketching tools for ideation (NIER track)
Extending predictive models of exploratory behavior to broader populations
Sketching tools for ideation: NIER track
Self-selection of accessibility options
Accessibility challenges and tool features: an IBM Web developer perspective
An introduction to programming with X10
Towards a Tool for Keystroke Level Modeling of Skilled Screen Reading
Towards a Tool for Keystroke Level Modeling of Skilled Screen Reading
Toward modeling auditory information seeking strategies on the web
Designing for auditory web access: accessibility and cellphone users
Reactive information foraging for evolving goals
Using CogTool to Model Programming Tasks
Business insight toolkit: Flexible pre-requirements modeling
Using tagging to identify and organize concerns during pre-requirements analysis
An overview of nanotechnology in Brazil (and its macro-challenges)
Web accessibility: a foundation for research
Towards an ecologically valid study of programmer behavior for scientific computing
Towards an Ecologically Valid Study of Programmer Behavior for Scientific Computing,
Towards Applying Complexity Metrics to Measure Programmer Productivity in High Performance Computing
Browser augmentation
Common & particular needs: a challenge to participatory design
Accessibility works: enhancing web accessibility in Firefox
Improving Web accessibility through an enhanced open-source browser
accessibility Works: Web Access for an Open Source Browser
Improving Web accessibility through an enhanced open-source browser
Web accessibility: a broader view
The VIP interface design system
Palm OS Web Application Developers Guide: Including PQA and Web Clipping
Summarization miniaturization: Delivery of news to hand-helds
Summarisation miniaturisation: delivery of news to hand-helds
Summarisation miniaturisation: delivery of news to hand-helds
Designing an e-grocery application for a palm computer: Usability and interface issues
Point-of-view: custom information delivery via hand-held devices
Summarisation miniaturisation: Delivery of news to hand-helds
Designing an E-grocery application for a palm computer: usabilityand interface issues
Exploring A New Paradigm for E-Groceries
Socially translucent systems: social proxies, persistent conversation, and the design of “babble”
NetVista: Growing an Internet solution for schools-References
NetVista: Growing an Internet solution for schools
An Object-Oriented Toolkit for Visual Interface Design
EDP effects on clerical workers
Using CogTool to model programming tasks
NetVista: Growing an Internet solution for schools-Author bios

**Patents**

Correcting systematic calibration errors in eye tracking data
Suppression of authorization risk feedback to mitigate risk factor manipulation in an authorization system
Creating tag clouds based on user specified arbitrary shape tags
AUTOMATIC CAMERA SELECTION BASED ON DEVICE ORIENTATION
DETECTING INPUT BASED ON MULTIPLE GESTURES
Auf Zeichen beruhendes elektronisches System und Verfahren fur Enthaltensein
In-betweening interactive states
Mark-based electronic containment system and method
Method and system providing viewing-angle sensitive graphics interface selection compensation
Creating Tag Clouds Based on User Specified Arbitrary Shape Tags
Method for automatically adjusting the rendered fidelity of elements of a composition
Task-based evaluation of user interfaces
Efficient navigation based on importance with audio output option
Privacy-preserving method for skimming of data from a collaborative infrastructure
INTERFACE CONTROL FOR SWITCHING BETWEEN DISPLAY REGIONS ON A DISPLAY
Space-conserving interface control for presenting and manipulating multidimensional state
INTERFACE CONTROL FOR PERFORMING SWITCHING AMONG DISPLAY AREAS ON DISPLAY DEVICE
Method and means for controlling the concurrent execution of a plurality of programs on a computer system
Look-up table based gamma and inverse gamma correction for high-resolution frame buffers

**Things I am proud of**

* Object-oriented ClassC programming
	+ helped test and deploy ClassC library
* Object-oriented graphics classes
	+ helped develop graphics classes
	+ helped create object-oriented toolkit
	+ developed airline seating demo using toolkit
* PS2 video card
	+ tested the video API
	+ developed application showing video in a window
* OS2 anti-aliased fonts
	+ developed and deployed anti-aliased fonts in OS2
	+ handed off to OS2 team
* OS2 embedded browser control
	+ developed OS2 embedded browser control
	+ handed off to OS2 team
* K12.net (NetVista)
	+ bring internet applications to schools on a low-cost budget
	+ developed internet applications for schools
	+ developed installation routines
	+ setup and maintained infrastructure
	+ traveled to schools to install, setup, and test installation
* Palm Pilot Safeway home shopping application
	+ developed shopping application on the Palm Pilot
	+ helped develop backend support for the shopping application
	+ deployed at Safeway UK
* Palm Pilot insurance application
	+ developed insurance agent application
	+ deployed for testing in Canada
* Visitor's/Applicant's web site
	+ Created an applicant web site for people interviewing with IBM for scheduling their visit
* Web Adaptation Technology (WAT)
	+ developed an IE plugin to allow low-vision users to modify web pages dynamically
	+ developed installation routines
	+ setup and maintained infrastructure
* accessibilityWorks
	+ developed a Firefox plugin port of the WAT technology
	+ developed installation routines
	+ deployed at a school in NYC
	+ worked with other organizations to install and setup in their facility
* Productivity assessment for parallel computing
	+ setup and maintained infrastructure to test
	+ developed routines to gather data
	+ helped analyze data
	+ X10 / X10DT programming and testing
	+ able to show >10% improvement in productivity
* Mobile application login with face, voice and gesture
	+ developed application to use face and voice as login methods on a mobile device
	+ developed installation routines
	+ installed and maintained backend infrastructure
* CogTool
	+ prototyping tool that uses a human performance modeling to automatically evaluate how efficiently a skilled user can do a task on a design
	+ helped deploy at IBM
	+ developed installation routines
	+ setup infrastructure for deployment
* Chef Watson
	+ create recipes using Watson technology that have never before been cooked
	+ [www.ibmchefwatson.com](http://www.ibmchefwatson.com)
	+ setup and maintained infrastructure on Bluemix
	+ setup and maintained backend process on VM
	+ developed log analysis routines
	+ deployed to IBM CSF infrastructure
* Maintaining researcher
	+ Maintain researcher infrastructure
	+ developed routines to upload photos and files
	+ developed routines to access Bluepages data
	+ helped develop and maintain interface to Google Scholar
	+ developed LinkedIn interface to import profile
	+ developed publications interface to Microsoft Academic
	+ developed and deployed W3id login
	+ maintained Watson Concept Insights (Piazza)
	+ ported Piazza to new Red Hat VM
	+ integrated Academy of Technology into researcher
	+ troubleshoot and fix problems
	+ test and deploy code
	+ modified code to replace Piazza with IBM Skills Locator
	+ migrated from tinyMCE 4 to tinyMCE 5
* Port Researcher to Bluemix
	+ deployed SQL database(s) to Bluemix
	+ deployed application(s) to Bluemix
	+ deployed application(s) to Kubernetes
	+ used Object Storage for pictures and files
	+ developed routines to upload files and photos to Object Storage
	+ used PHP S3 interface to access Object Storage
	+ ported researcher from PHP 5 to PHP 7
* Group Support
	+ supported the groups that I was in by setting up, maintaining, troubleshooting team laptops
	+ setup and maintained group infrastructure
	+ group IT support
	+ go to person for troubleshooting problems
* Systems
	+ Macintosh
	+ Windows
	+ Linux
* Languages
	+ html
	+ javascript
	+ python
	+ php
	+ some java
	+ some nodejs express
	+ docker