

CAPCHI

The state of HCI in Ottawa

Arnold Campbell
Design Interpretive

Wednesday, November 15



design.interpretive

... transforming human factors discoveries into design solutions for Nortel Networks customers



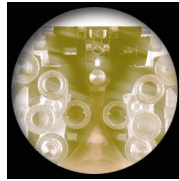
Designing the human experience of "how the world shares ideas"

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Designing the human experience

=

Putting simplicity into the new Internet



NORTEL
NETWORKS™

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- **The Opportunities...**
- The Skills
- How to get The Skills

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NETWORKS™

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Design for...

Installer
Network Operator
Operator
Call Center Agent
CIO
Buyer
Mobile
Workers
Web Based Business
Users
Network Manager
Web surfer

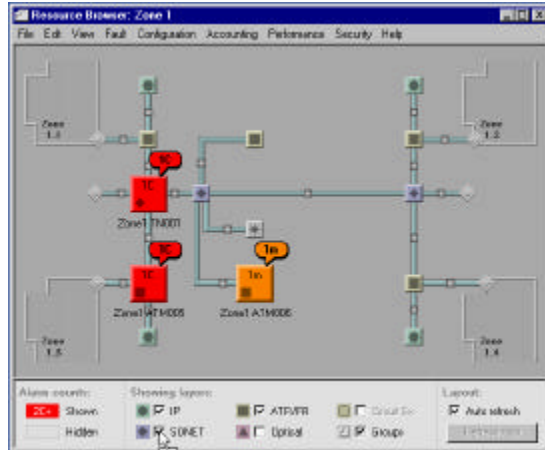
NORTEL
NETWORKS™

Infrastructure:
Products
to build
and deploy
networks



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NETWORKS™

Back Office:
Simplify human-computer interaction for communications operations centres throughout the world. (Network management)



Front Office:
Design the experience of conducting Business Transactions on the network

Your order:	
One time fees:	
1 Three-line telephone	\$299.99
1 Enhanced Feature Adapter	\$199.99
taxes:	\$74.99
Total:	\$574.99

Monthly charges:	
Line 555-1234	\$16.99
Call Waiting	\$3.99
Call Display	\$3.99
Line 555-3417	\$16.99
Visual Call Waiting	\$3.99
Call Forward	\$3.99
taxes:	\$7.79
Total:	\$59.73

Your information:

Name: _____
 Address: _____
 City: _____
 State/Province: _____ Zip/Code: _____
 Phone: _____ Fax: _____
 Email: _____

Credit Card: AwtEx Master Card Visa
 Number: _____ Expiry: _____
 Payment of monthly charges: bill me Charge my credit card

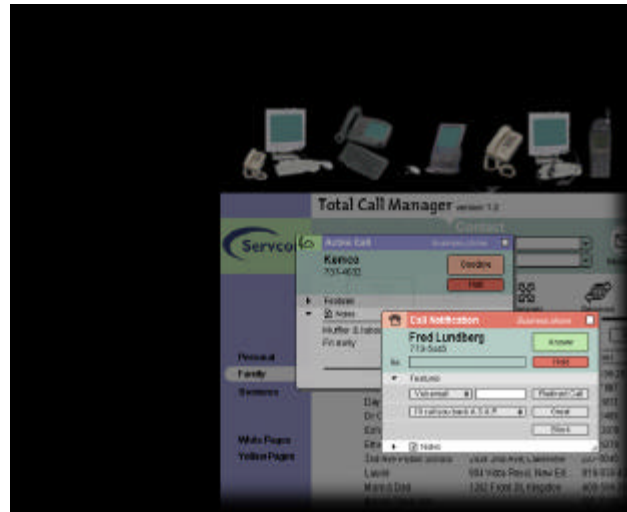
Your credit card will be charged **\$574.99** **Order Online**

To make any changes press **Retry** Your order will be confirmed immediately.

Alternative purchase options: Order from a Representative How **Print Order** to send by regular mail **Save Order** to send by email



Design the
experience of
multimedia
communications



NORTEL
NETWORKS™

...to become a subject matter expert in
designing Simplicity for:

- Products used to build and deploy networks
- Interfaces to manage back office operations
- Interfaces to manage front office operations
- Interfaces to conduct personal business on the network

NORTEL
NETWORKS™

We're looking for:

- Human Factors Usability and Research Specialist (UNA)
- User Interface Designer
- Visual Interaction Designer
- Industrial Designer
- Mechanical Designer
- Web and Multimedia Developer



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- The Opportunities
- **The Skills...**
- How to get The Skills



What's needed most?

A passion to make things
simple...

Simple to Buy

Simple to Use

Simple to Manage

Simple to Install



...an ability to work with and
understand:

Business Case

Manufacturability

Life-cycle costing

Durability

Bottom line



... an understanding of:

Human Factors Cognitive
Function Feel Creativity Culture
Pizzazz Usability WOW Form Factor
Beauty Spirit Affordance
Simplicity Ergonomics Interface
Touch Kinesthetics Senses
Visual vocabulary



... a sense of:

Function Cognitive Creativity Culture
Human Factors Feel WOW
Pizzazz Usability Form Factor
Beauty Spirit Affordance
Simplicity Ergonomics Interface
Touch Kinesthetics Senses
Visual vocabulary

the Human Experience



Technical skills

- Psychology of interaction
 - User-centred analysis techniques
 - How to turn analysis into design (design process skills)
 - Design at architectural level, integrating multiple interfaces, applications, environments
 - Understanding of basic business and research and development principles
 - Rapid prototyping
 - Knowledge of networks and internet
- Director
- Alias
- Pro-Eng
- Photo shop
- Fireworks
- Flash
- Web authoring



Soft Skills

Teaming
Creativity and Problem solving
Flexibility
Fast and Approximate
Negotiation
Problem Solving
Tolerance for Ambiguity
Project management
Communication (visual & verbal)
Project management



You need to express your Creativity
and Innovation through:

cyber
prototypes

usability
testing

java
programming

web
design

rapid
prototyping

physical
prototypes

user interface
design



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- The Opportunities
- The Skills
- **How to get The Skills...**



Some of disciplines that make up design.interpretive

industrial design psychology fine art
ergonomics human factors graphic design
mathematics business
engineering computer science



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Our History

Over 30 years in product design

1968 The first **Industrial Designer** joins Northern Electric Labs in Ottawa

1969 Contempra first telephone to be wholly designed by Northern Electric

1973 ID and Human Factors groups amalgamate to form Design Interpretive

1974 TOPS the first computer based workstation for telephone operators

1976 User Needs Assessment (UNA) function adopted by Design Interpretive

1985 Meridian 3000 first telephone to offer users touch sensitive display based interface

1989 Tops MP combined toll directory assistance and other services into one workstation

1992 Assigned role of center of excellence for ID, Human Factors, and UNA

1999 Patents granted for Network Management **Graphical User Interface**



