Image Cover Sheet

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TITLE

DELIVERING CORROSION COURSEWARE: THE EVOLUTION OF THE RMC CORROSION SHORT COURSE

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Delivering Corrosion Courseware: The Evolution of the RMC Corrosion Short Course

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ABSTRACT

The Corrosion Short Course given at the Royal Military College every second year since 1987 had been requested by the CF Corrosion Committee and designed by some of its scientific members. Typically the course covered topics such as:

- Case histories;
- Fundamentals of metallurgy, thermodynamics and kinetics;
- Paint and coatings, failure analysis; and
- Cathodic protection and design considerations.

The instructors and attendees of the one week long course came from various DND organizations of different parts of Canada. The recent downsizing in DND brought, along with the demise of the Corrosion Committee itself, an erosion of the number of instructors available and of the ability of the system to staff the course with attendees. A new approach had to be considered to deliver the course and advertise its availability. Fortunately the means by which information can be vehicled have improved to a point where it has become possible to deliver complex course materials via simple communication channels. Portable computers have been with us for a decade now, yet we have only just started to unleash their power. In many areas of technology, people have started to invent useful methodologies to support routine human activities. The flexibility provided by computerized information systems is tremendous once the initial investment has been made. This paper will describe the status of the Corrosion Short Course, circa 1997, and discuss the strategy that gradually evolved by considering available software and transmission technologies.

DELIVERING CORROSION COURSEWARE: THE EVOLUTION OF THE RMC CORROSION SHORT COURSE

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Developing CSC Courseware

* CSC History
* CSC Instructors and attendees
* Present status
* Distance learning
* Publishing tools

RMC CSC History

- The course was established in answer to a request by the CF Corrosion Committee;
- The one week long course was offered every second year since 1987;
- Instructors and attendees came from various CF organizations.

RMC CSC History

- Criteria for attendance were:
  - Personnel with junior officer rank or above/ or civilian equivalent with at least a degree in post-high school chemistry;
  - Personnel employed in positions involving life cycle material management (LCMM) design, specification preparation or procurement specification of systems and equipment;
  - Personnel employed in positions involving repair and maintenance.

Main Topics of the CSC

* Corrosion case histories;
* Fundamentals of metallurgy;
* Thermodynamics and kinetics;
* Paint and coatings (inorganic & organic);
* Corrosion testing and failure analysis;
* Cathodic protection;
* Design considerations;
* Corrosion information resource.

RMC CSC History: present status

* The staffing organization disappeared in the downsizing process;
* Some instructors have also been downsized;
* The absence of the CF Corrosion Committee also means less recognition of corrosion efforts or needs in the CF;
* Does it mean corrosion problems have also been minimized ?
* And the need for training ?

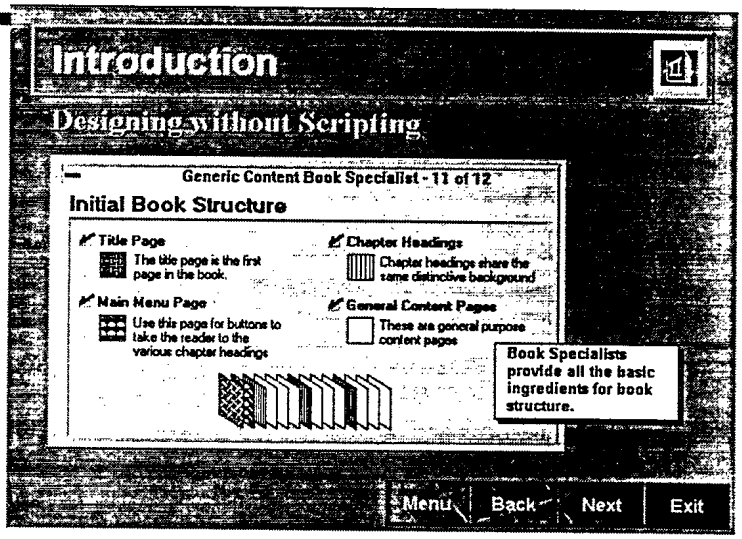
RMC 427B vs. the CSC

Topics	Army	Navy	Air
1.Aqueous Corrosion	√	√	√
2.Corrosion Testing		√	√
3.Surface Characterization			
4.Life Prediction and Cost Analysis			
5.Failure Analysis	√	√	√
6.Corrosion Monitoring and Inspection		√	√
7.Protective Coatings	√	√	√
8.Corrosion Inhibitors		√	√
9.Cathodic and Anodic Protection		√	
10.Atmospheric Corrosion			√
11.Corrosion of Reinforcing Steel in Concrete	√		
12.Hot Corrosion		√	√

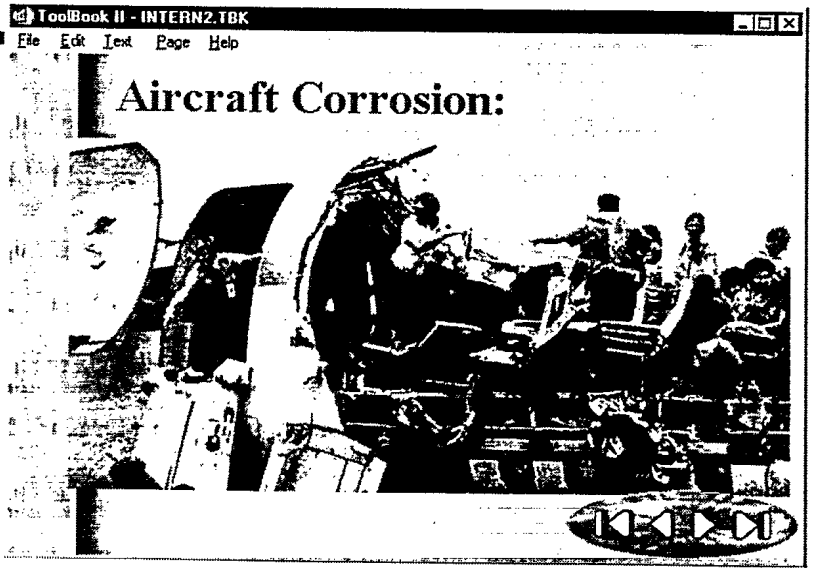
RMC CSC History: future

* **RMC is becoming the center of CF distance learning;**
* **An infrastructure has been created to evaluate the university creditability of present courses offered in the CF;**
* **RMC would like to see the CSC move in these directions;**
* **How can we achieved such goal ?**

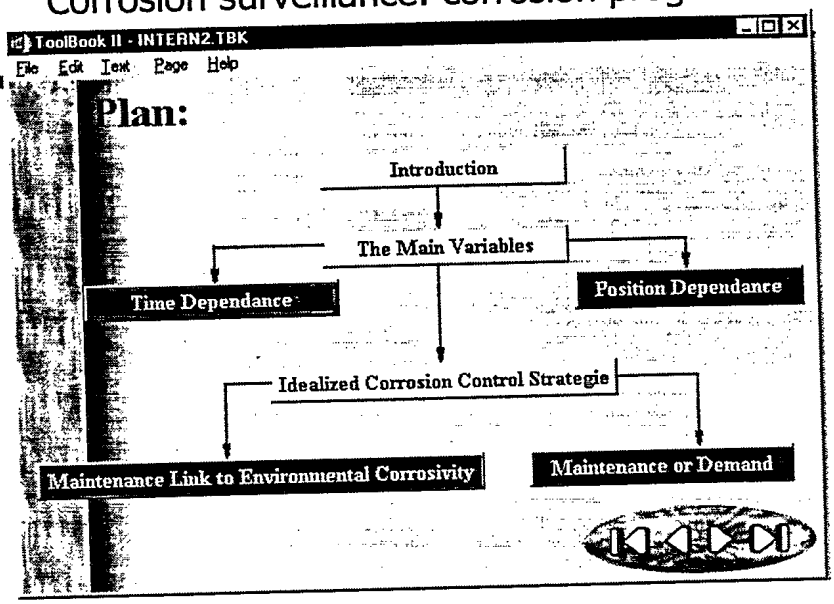
TOOLBOOK II INSTRUCTOR



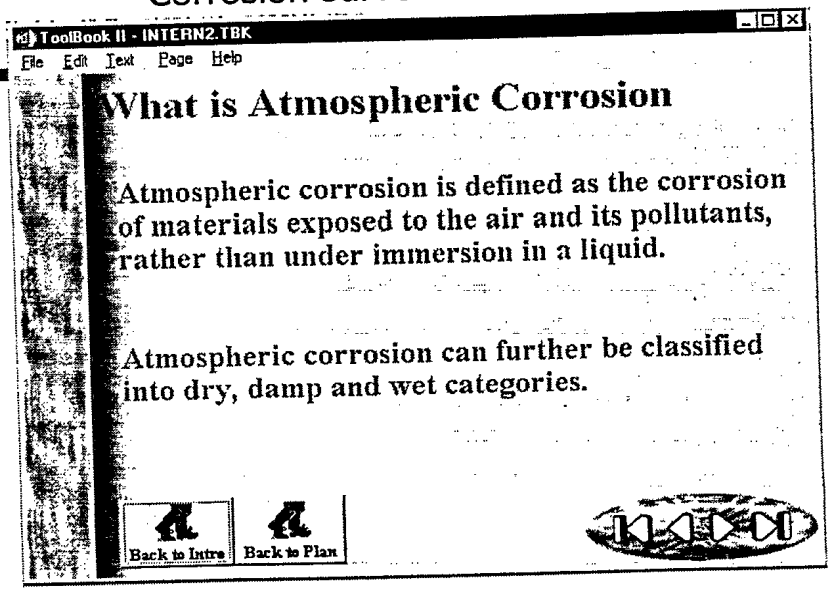
Corrosion surveillance: internet main screen



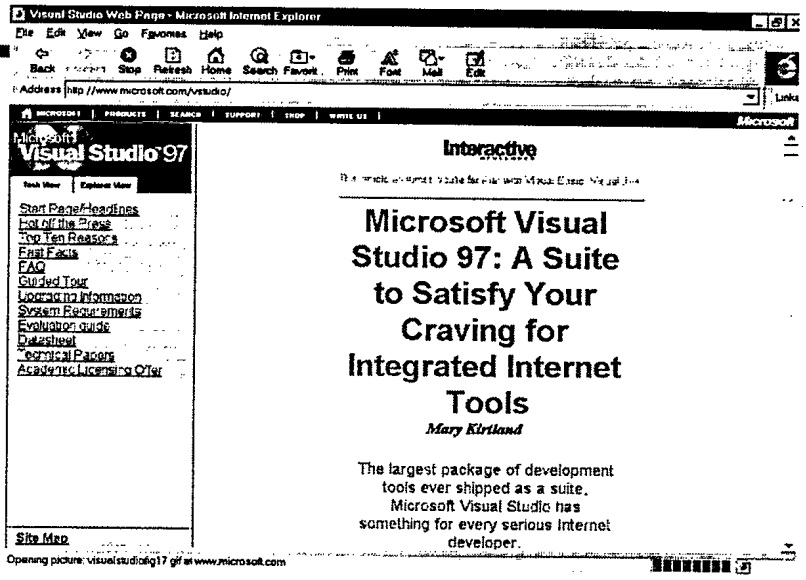
Corrosion surveillance: corrosion program



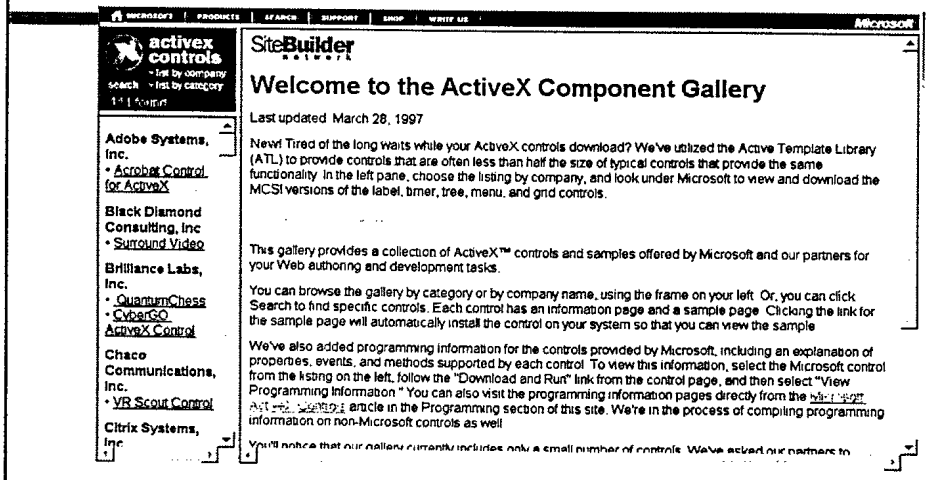
Corrosion surveillance: definition



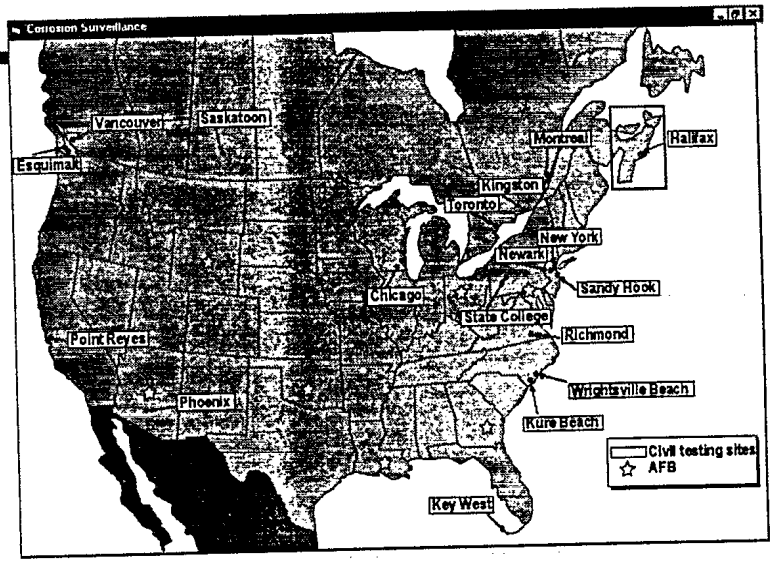
Visual Studio 97



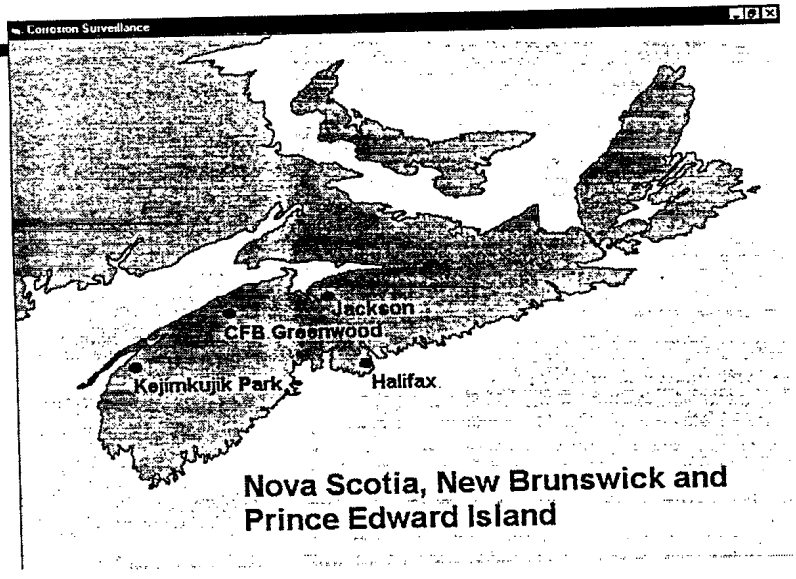
ActiveX controls



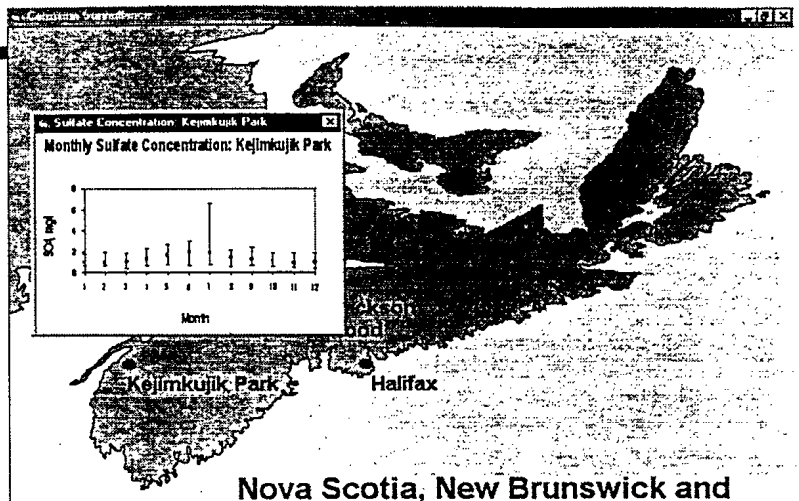
Atmospheric corrosion: North America



Corrosion surveillance: CFB Greenwood

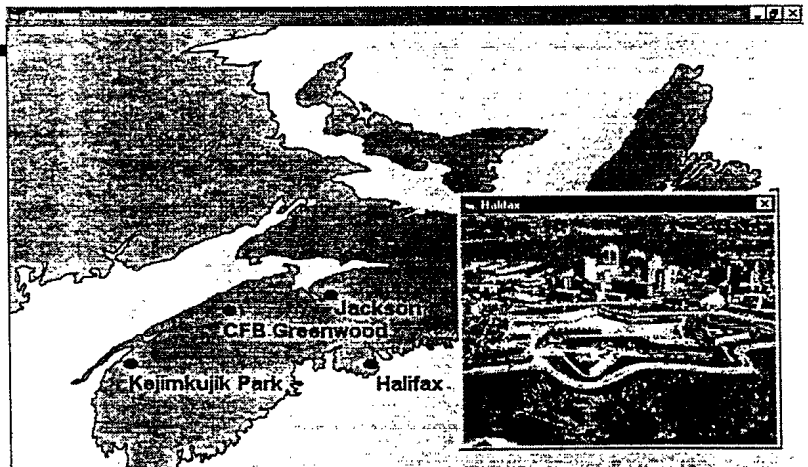


Corrosion surveillance: looking at data



Nova Scotia, New Brunswick and Prince Edward Island

Corrosion surveillance: planning field trip



Nova Scotia, New Brunswick and Prince Edward Island