National Center for Manufacturing Sciences

Information Technology "Push"

The Automatic Delivery of Electronic Information for Business

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Need for Key Information

- Knowledge critical to successful business
- Tremendous amount of information available
  - Internet, Web, Databases, etc.
- Rate new information generated is accelerating
- Right people aren't getting the right information
- Get relevant information to the right people at the right time
  - Don't bombard people with a lot of paper

Solution

- Develop electronic capability to provide key information
- Characterize people and/or company interests
- Deliver synopsis that matches profile
- Provide easy access to additional information
- Pilot technology at NCMS
- Move technology to member companies

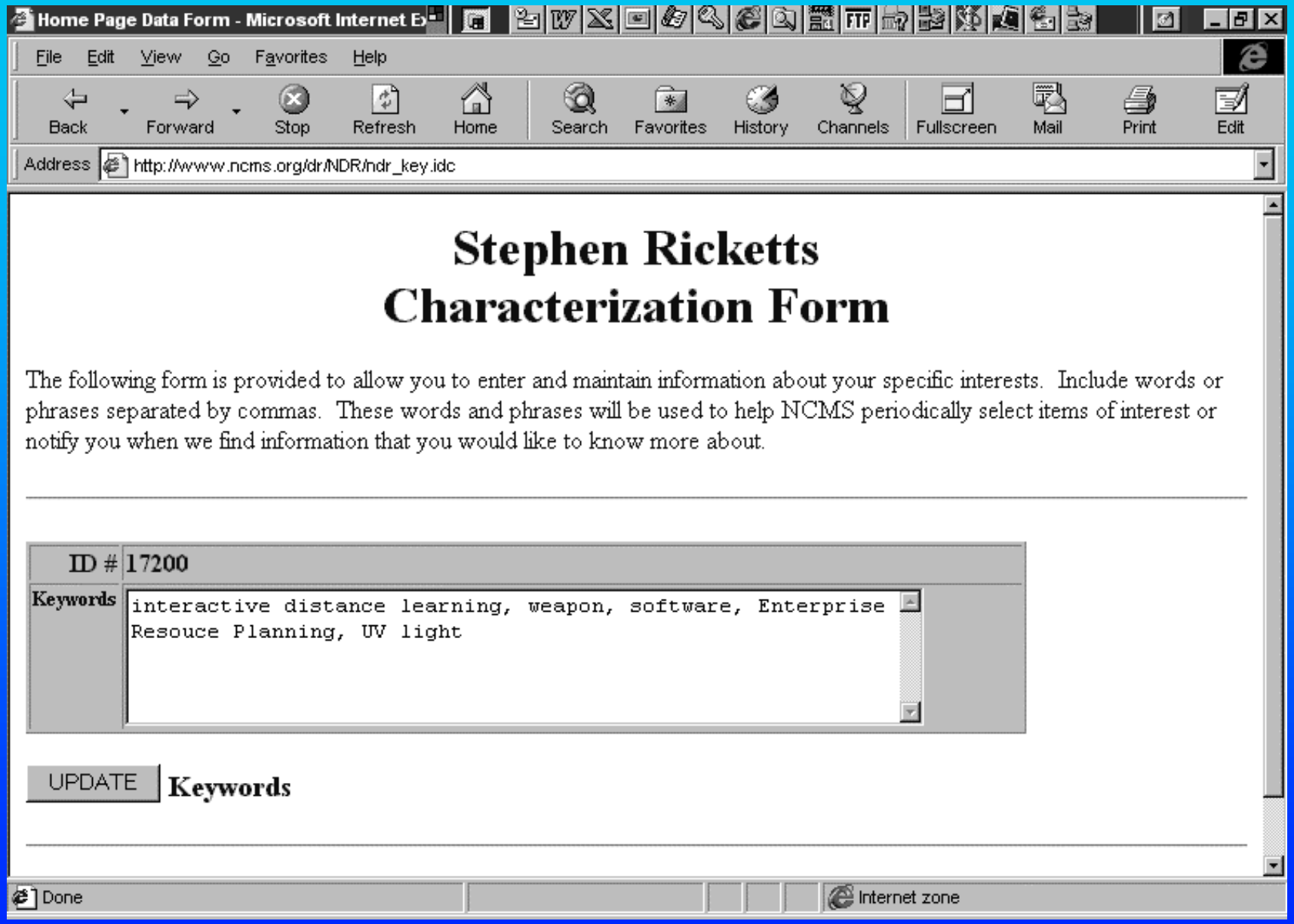
Push Technology Overview

- Notify members when new information entered
  - Project, Concept, Funding Opportunity
  - Product, Service, Document
- Characterize individuals by areas of interest
- As new information is entered into the system
  - Deliver summary information by e-mail
  - Link to more detailed or contact data on web
- All information maintained in repository
- Profiles maintained by individuals via web

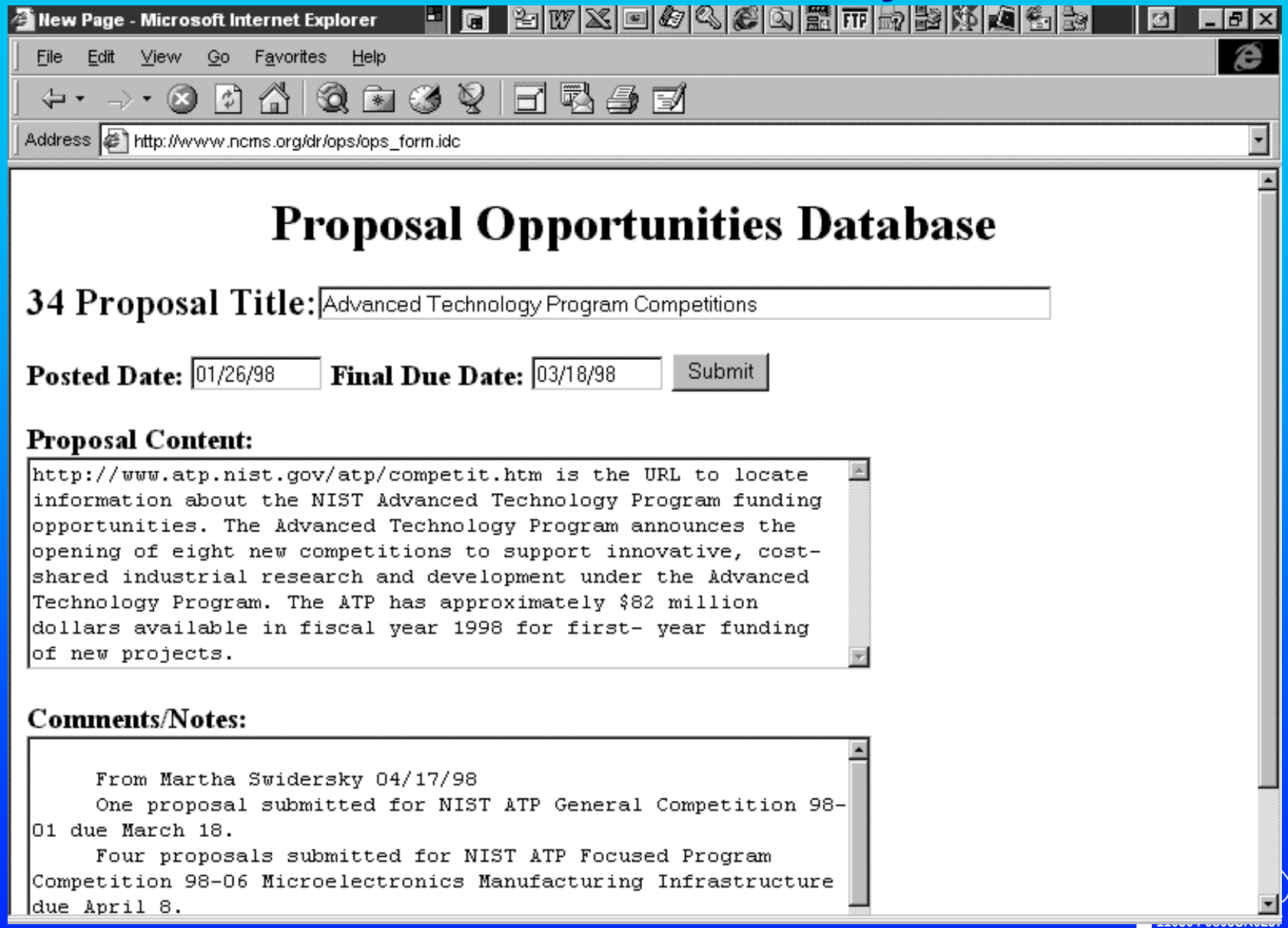
NCMS Pilot

- Identify key contacts within member companies
- Characterize selected members
- Enable “Push” engine
- Attach to new project Concept information
- Modify profiles as appropriate
- Add additional sources of information

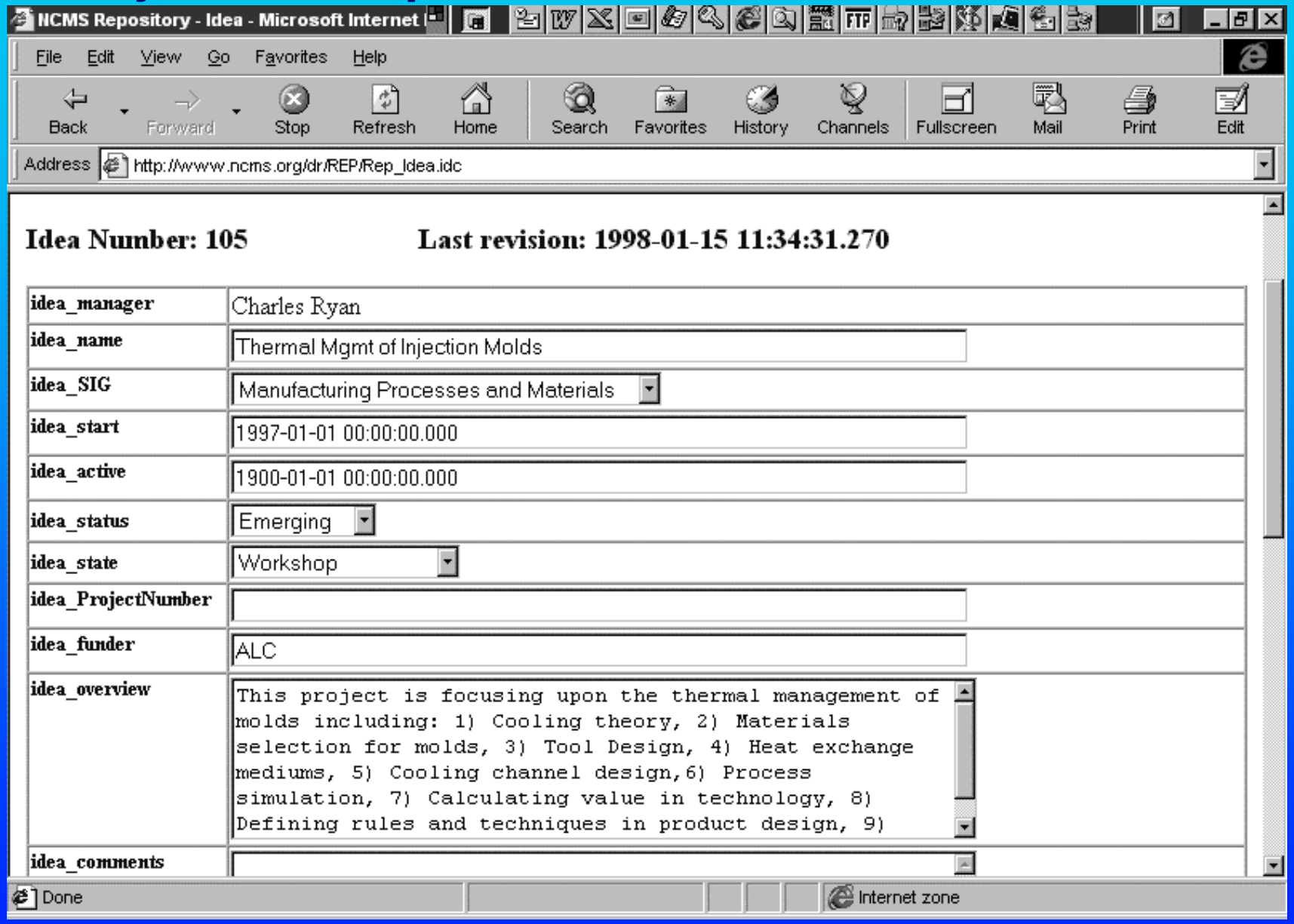
Characterization Form



Introduce New Information into System



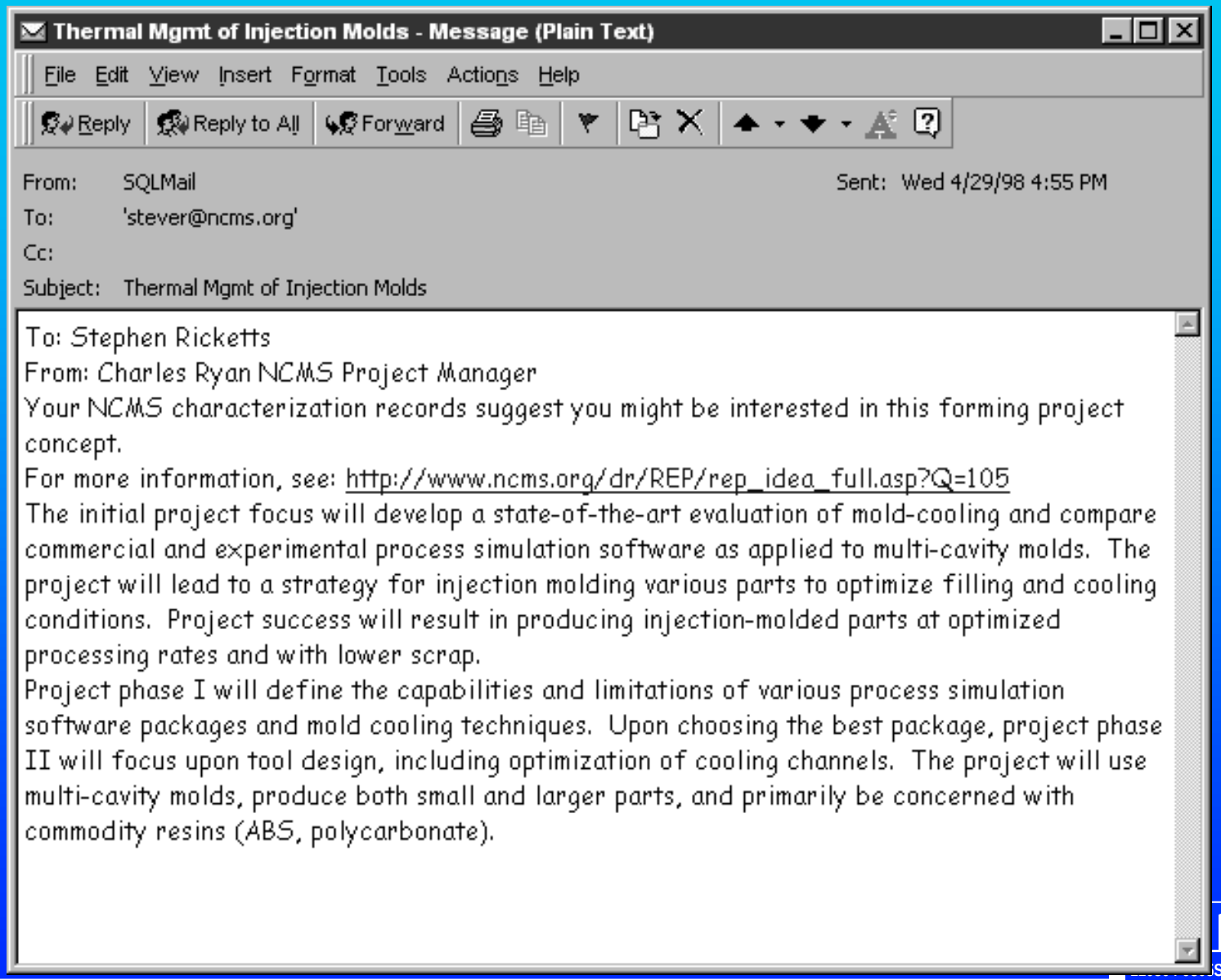
Project Concept Form



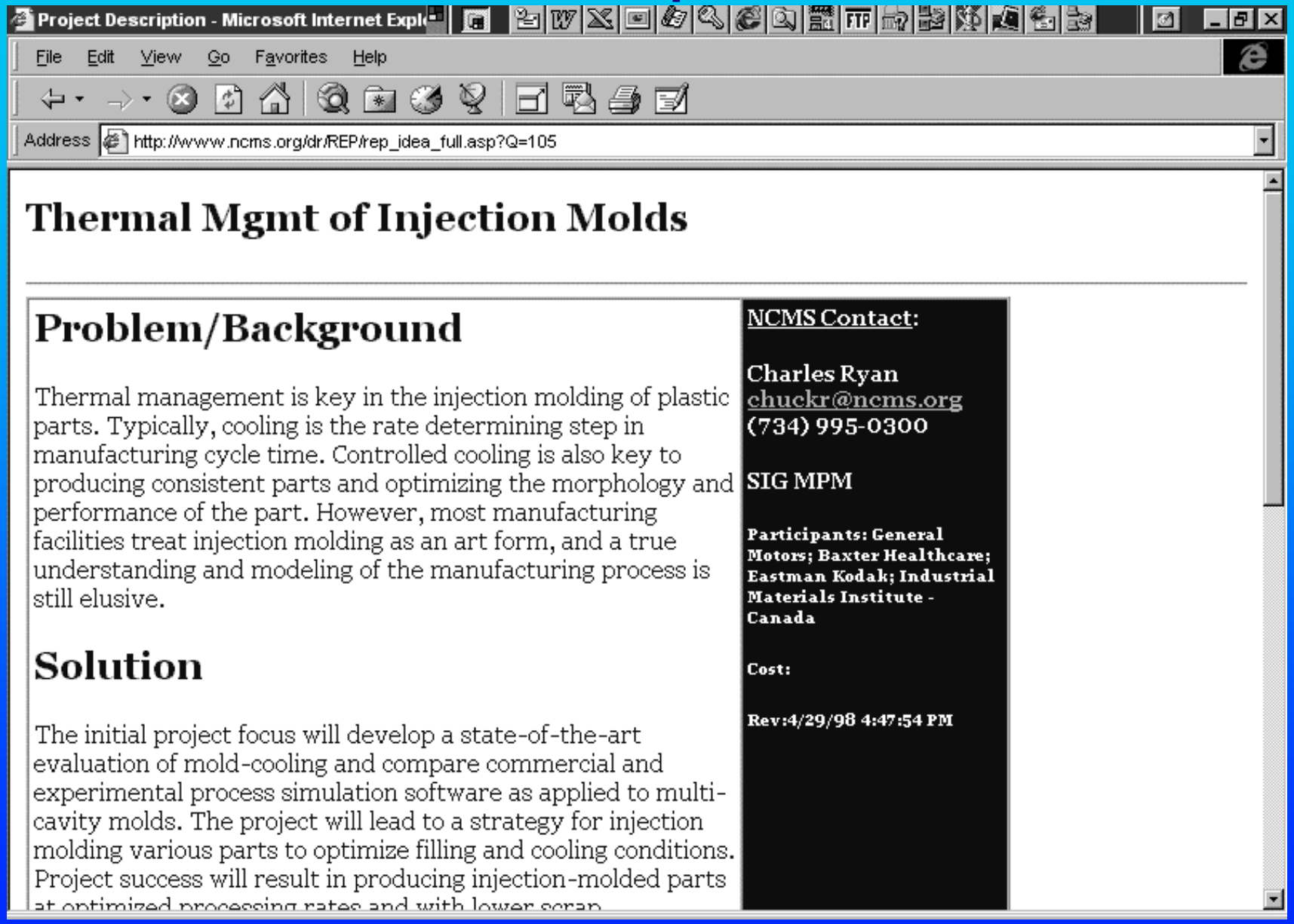
Updating New Information Record

- Information is submitted into system
- People/Company records scanned for matching profiles
- Matched records stored in work table
- Records sorted, duplicates eliminated
- E-mail created for each match
  - Synopsis of information
  - Link to additional detail

E-mail Notification



Web Based Detail Description



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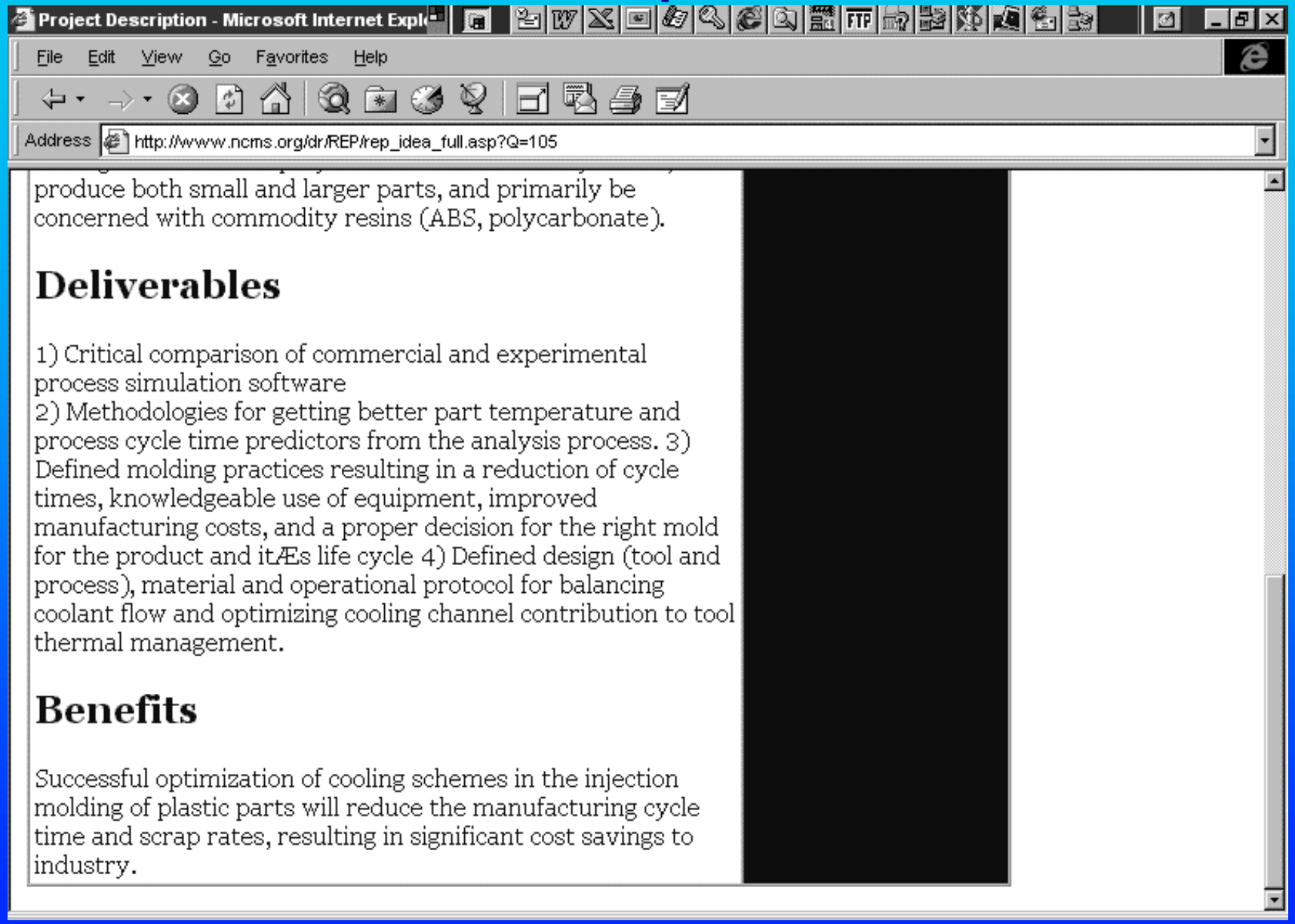

produce both small and larger parts, and primarily be concerned with commodity resins (ABS, polycarbonate).

Deliverables

1) Critical comparison of commercial and experimental process simulation software
2) Methodologies for getting better part temperature and process cycle time predictors from the analysis process. 3) Defined molding practices resulting in a reduction of cycle times, knowledgeable use of equipment, improved manufacturing costs, and a proper decision for the right mold for the product and itÆs life cycle 4) Defined design (tool and process), material and operational protocol for balancing coolant flow and optimizing cooling channel contribution to tool thermal management.

Benefits

Successful optimization of cooling schemes in the injection molding of plastic parts will reduce the manufacturing cycle time and scrap rates, resulting in significant cost savings to industry.

NCMS Pilot Objectives

- Prove technology via collaboration
- Acquire valuable information
- Reach key NCMS members
- Move technology to member companies

Summary

- Acquire knowledge critical to successful business
- Deal with rate of information acceleration
- Receive right information at right time