

provides data of vibration amplitude and accordingly Bearing Fault Detection System identified the fault in the bearing and generates the analysis report. Bearing Fault Detection System is developed in Microsoft Visual Basic 6.0 with backend database as MS Access.

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Design by Vishnuvenkatesh M. Dhage and Ritesh B. Kanojiya.

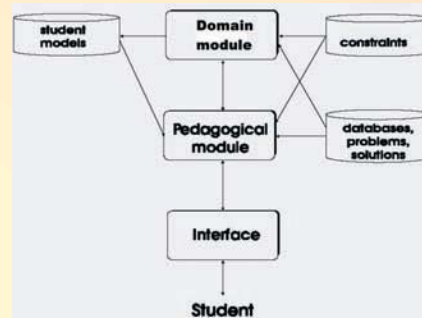
### How to Learn?

*"I hear and I forget.  
I see and I remember.  
I do and I understand."*  
Confucius

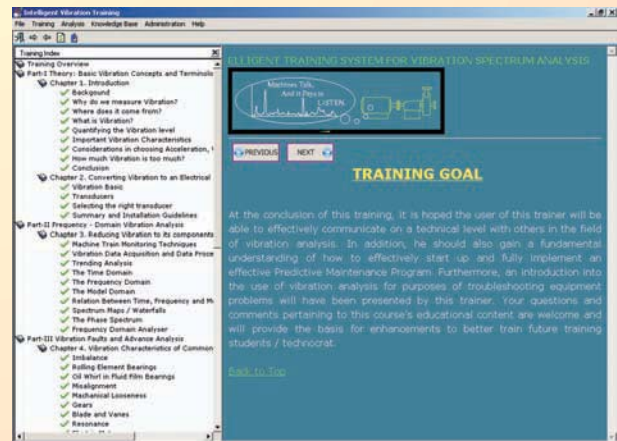
### VIB-TUTOR

- Provide a good "on-hand" practice to student discovering Machinery vibration.
- Teaching with Example
- Vibration analysis with built-in Database relations.  
Useful feedback is given by the system.

### Vib-Tutor Design



### Vib-Tutor Training Screen



### About Vib-Tutor

- Focus on "Machinery Vibration Spectrum Analysis"
- Provide Web based environment for training.
- On hand training examination.
- Multi user interface
- It helps user to achieve complete insight of machinery health.

### Why Learning?

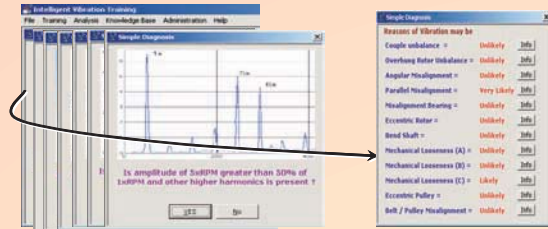
*"Give a man a fish and  
he will eat for a day.  
Teach a man to fish and  
he will eat for the rest of his  
life."*

Chinese

Proverb

### Vib-Tutor Training Model

- Modeling (allows to Use Constraint-Based reduce complexity by focusing on faults only)



## Vib-Tutor Constraint Representation

```

If dominant_direction = "Radial" Then
  If Phase_shift = "90" Then
    If Amplitude_Hori=Amplitude_Veri Then
      If Pulley="NO" Then
        If dominant2x="Yes" Then
          .....
          .....
          .....
          .....
          .....
          .....
          If dominant5x="Yes" Then
            'Probable Causes of machine vibration are
            Couple Unbalance = Unlikely
            .....
            Parallel Misalignment = Very Likely
            .....
            Mechanical Looseness (C) = Likely
            .....
            .....
            End If
            .....
          End If
        End If
      End If
    End If
  End If
End If
  
```

## Vib-Tutor Demo

- Start Vib-Tutor Program

