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Synchronize & Stabilize Teams

*) The idea behind the synchronize & stabilize model is → Continually synchronize what people are doing as individuals & as members of parallel teams, & periodically stabilize the product in increments as a project proceeds, rather than once at the end of a project.

*) Microsoft has been using this approach to software development & team organization since the late 1980's on many of its popular products, including Office, Publisher, windows 95/98 & ... has achieved great success as a result.

Synchronize:

* They put the partially completed components together of test & debug the resulting product.

Stabilization:

* Any remaining faults are fixed.

* The build is now frozen.

Steps:-

<u>At the end of each day all the teams</u>
<u>Synchronize</u>

* They put the partially completed components together. and

* Test & debug the resulting Product.

<u>Stabilization is Performed At end of each build</u>

* Any remaining faults are fixed

* The build is now frozen.

  (No further changes will be made to the specification document)

<u>Synchronize & Stabilize Teams</u>

* Microsoft, Inc is the world largest manufacture of COTS Packages.
  - These are generally large scale Products.

<u>Examples</u>

→ Window 2000 consists of more than 30 millions of lines of code.

⇒ Developed by over 3000 programmers & testers.

* Team organization is a vital aspect of the Successful Construction of Product of this size.

** Microsoft COTS packages are developed using the synchronize-and-stabilize life-cycle model.

→ This model has feature in common with the Unified Process.

→ In Particular, incrementation is heavily used.

The requirements Phase is Conducted by:

** Interviewing numerous Potential customers for the COTS package &.

A\> A specification document is now drawn up that reflects the Customers responses to the interviews.

Next, the Product is designed & implemented

** The work is divided into three or four increments.

** The first build consists of the most important features.

→ once the first build is complete, the second build is started.

→ Second build consists of the next most important features & so on.

The repeated synchronization step ensures that the various components always work together.

→ The developers also obtain early insights into the operation of the product.

→ they can modify the requirements if necessary during the course of a build.

The success of the life-cycle model is largely a consequence of the way the teams are organized.

*¶ Each build is constructed by a number of small teams.

→ Led by a program manager &

→ Consisting of 3 to 8 developers together with 3 to 8 testers who work one to one with developers.

The teams is Provided the specification of their overall task.

A The team members are given the freedom to design & implement their Portion of the task as they wish.

The reason this does not rapidly devolve into Chaos is:

→ The synchronization step performed each day.

→ The partially completed components are tested & debugged on a daily basis.

<u>The Strength of this approach is that</u>

→ Individual programmers are encouraged to be creative and, innovative, but.

→ The daily synchronization step ensures that the hundreds of developers work together toward a common goal.

Microsoft developers must adhere strictly to the time laid down to enter their code into the product database for that day synchronization.

→ this has been likened to telling children that they can do what they like all day but have to be in bed by 9p.m.

If a developer's code prevents the product from being compiled for the day's synchronization.

A: Use of many of the features of the model in other Organization could lead to process improvement.

A: On the other hand, it has been suggested that the synchronize-and-stabilize model is simply a way of allowing a group of hackers to develop large Products.

Thank You Sir!