XP in Product Support

XP in Product Support Environment

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Agenda

- Subex Support Vision

- Problems faced in implementing XP in support environment

- Product Lifecycle Overview – Roadmap to CDT to Support

- Development Support Process

- XP and Development Support

Subex Support Vision

Subex Support Vision

- Total Customer Satisfaction

- Support - the differentiation factor

- Do whatever that is required for the Customer

Problems Faced in Product Support

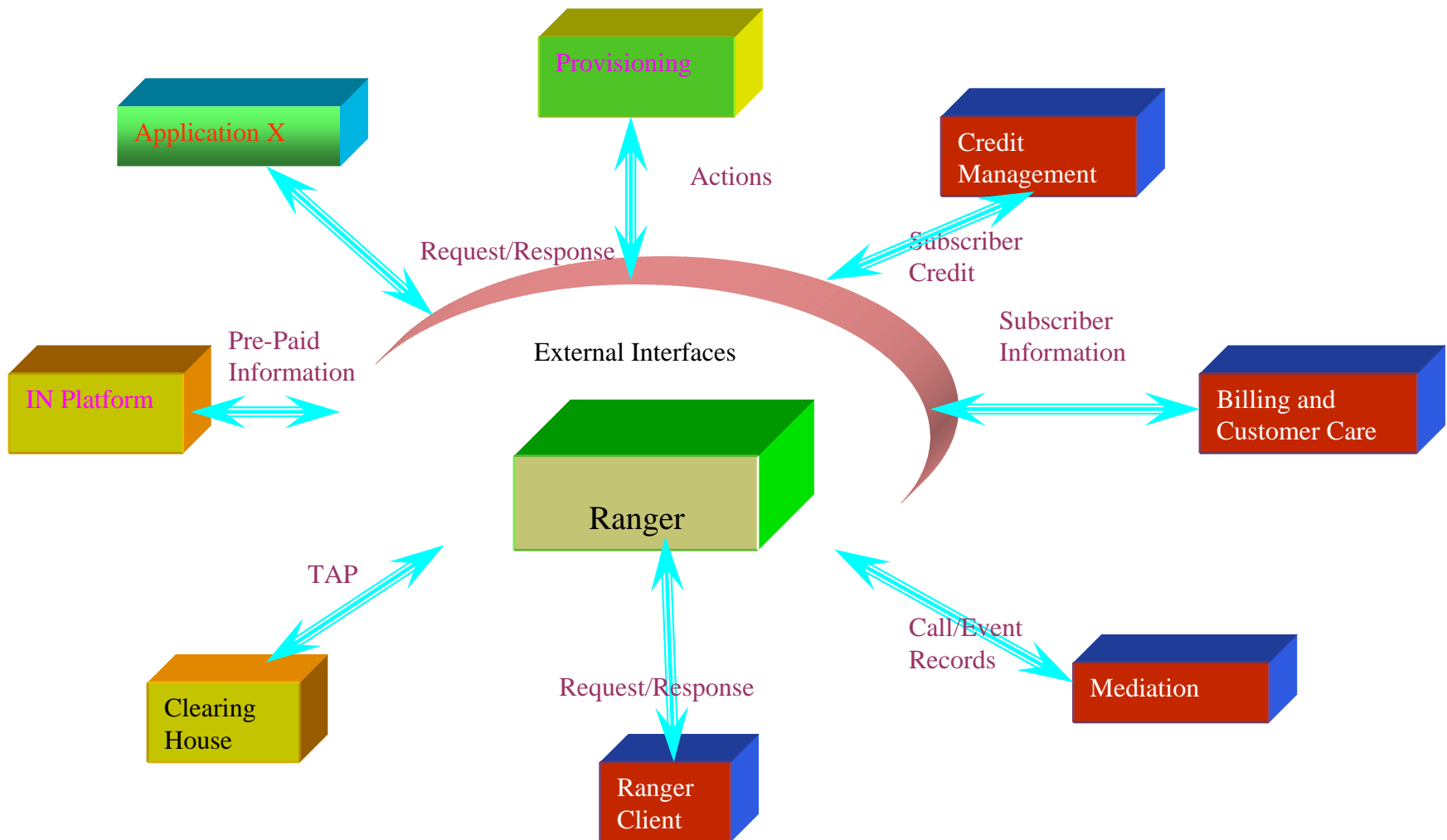Problems faced in Product Support environment using XP

- Loss of Re-factoring
- Pair Programming not possible always
- Lack of On-site customer
- Inability to maintain sustained pace
- Issues reported at Random
- Maintain AT's and UT's without affecting resolution times
- Automation of AT's
- Merging of code
- Incremental change cannot be done
- Release and Iteration Planning not feasible.

Product Life Cycle Overview

- Development is made of different Teams
  - Road Map team
    - Develops the core of the Product based on requirements from the Product Management team
  - Customer Delivery team
    - Develops customizations for specific customers and releases the product to the customers as per the needs of the customer
  - Development Support team
    - Provides support and maintenance releases to customer with a focus on faster resolution times for reported support issues

Interfaces

Provisioning

Application X

Credit Management

Actions

Request/Response

Subscriber Credit

Pre-Paid Information

Subscriber Information

External Interfaces

IN Platform

Ranger

Billing and Customer Care

TAP

Clearing House

Request/Response

Call/Event Records

Ranger Client

Mediation

Product Life Cycle Overview – Road Map

- Product Management provides Market Requirement Document(MRD) to Development Roadmap

- Roadmap Team with the MRD develops
  - Functional Specifications

- Output of Roadmap team
  - Develop UT's
  - Automate AT's
  - Develop the core of the product
  - Provide necessary documentation to other teams
  - Release well tested and benchmarked core to the Customer delivery Team

Product Life Cycle Overview - CDT

Customer Delivery Team (CDT)

- Input to the Customer Delivery Team
    - The core of the product from the Roadmap Team with the UT's, Automated AT's and other necessary documentation
    - Few resources rotated from the Roadmap team for communication and Knowledge Transfer
    - Customer Specific requirements and data.
- Output of Customer Delivery Team
    - Ensure UT's are written for the customizations
    - Develop necessary Customizations
    - Ensure all AT's are Automated
    - Release, Install and ensure UAT is completed for the customer.
    - Provide necessary documentation to other teams

Product Life Cycle Overview - Support

Development Support Team

- Input to the Development Support Team
  - Customer Specific requirements and sample data
  - Few resources rotated from the Roadmap team and Customer delivery team for communication and Knowledge Transfer
  - Support issues logged by different customers.
- Output of Development Support Team
  - Provide clarifications/ Support to Customer support team
  - Analyze and resolve site issues
  - Modify existing UT's, AT's, code to resolve support issues
  - Provide maintenance releases to customers
  - Communicate common issues to Road Map and Customization team

Development Support Process

Support Processes

- Problem Reporting

- Problem Classification

- Problem Resolution

- Response Expectations

- Escalation Process

Development Support Process

Problem Reporting/ Classification

- Customer reports issues to Customer Support team
  - By e-mail
  - By Phone
  - Through the Extranet in to the Defect Tracking System (DTS)

- Customer support Engineer looks in to the issue

- Unresolved issues are classified in to Critical, Major, Minor and assigned through the DTS to Development Support

Development Support Process

Problem Resolution

- Replicating the Client environment.
    - Have the necessary set up in house
    - Establish VPN connectivity to the client
- Ensure Knowledge Transfer has happened
    - Rotation of people from Road map and CDT to Support – Collective ownership.
    - Knowledge repository maintained – Continuous feedback, communication
    - UT's diligently maintained – TFD

Development Support Process

Problem Resolution

- Pair Programming/ Analysis
  - Pair works together towards problem identification
  - Quicker identification of problem
  - thought out corrective actions towards the resolution
  - Quicker and better resolution
  - One person analysis based on number of issues reported
  - In such cases final analysis always discussed with one more person to still get the benefit of pair analysis.

Development Support Process

Problem Resolution

- Re-factoring

    - Quicker Resolution and turnaround results in less re-factoring

    - However issues for refactoring are identified

    - When customer issues are less, re-factoring is picked up.

    - Maintenance/ Upgrade releases for customers are scheduled.

- Sustained pace

    - Issues are reported at Random.

    - Sustained pace not feasible

    - Encourage resources to take off during less strenuous periods.

Development Support Process

Problem Resolution

- TFD
  - Need of the hour to provide quicker resolution.
  - Pair modifies code and ensures all UT's pass
  - UT's never forsaken

- On Site Customer
  - On site customer not possible in support environment
  - Overcome by having the customer support engineer as the onsite customer
  - Conference calls with end user to communicate on the open issue.

Development Support Process

Problem Resolution

- Release Plan and Iteration Plan
    - Release plan and Iteration plan not possible most of the time.
    - Iteration plan for maintenance and upgrade releases
    - Daily stand ups done
    - User stories created and stored in Automation system.

- AT's
    - All AT's are not necessarily automated at the time of resolution
    - Post release ensured that all AT's are automated and passing

Development Support Process

Problem Resolution

- Incremental Changes

  - The nature of the issues reported may not support incremental changes.

  - For solution which require more than a day's effort, incremental changes approach is used.

- Merging

  - Code changes rapidly in support environment

  - Feedback is provided to Road map/ CDT team to merge changes done in support

  - Developers/ testers are rotated from support team to ensure knowledge transfer of typical site issues faced.

Conclusion

XP helped to

- Improve stability of code through collective ownership
- Faster resolution times through
  - Pair programming/ Analysis
  - TFD
  - AT's

- Overall improved customer satisfaction
  - Better impact analysis
  - Less regression bugs

Questions ?

Thank you