

ACTIVITY FLOW MODELING - HIRE PROCESS



PROJECT WORK DONE AT
RAMCO SYSTEMS LIMITED,
CHENNAI -600 113

PROJECT REPORT

P-1132

SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR THE AWARD OF THE DEGREE OF
M.Sc [APPLIED SCIENCE] SOFTWARE ENGINEERING
OF BHARATHIAR UNIVERSITY, COIMBATORE.

SUBMITTED BY
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE - 641 006

DEC 2003 - MARCH 2004

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
KUMARAGURU COLLEGE OF TECHNOLOGY
(Affiliated to Bharathiar University)
COIMBATORE – 641 006
DEC 2003 – MARCH 2004

CERTIFICATE

This is to certify that the project entitled
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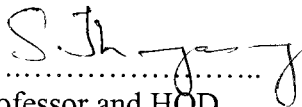
DONE BY


R.VISHNU PRAKASH

Reg No. **9937S0100**

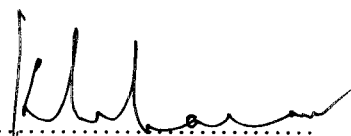
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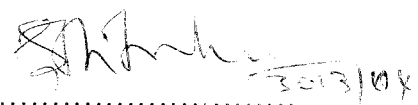
M.Sc [Applied Science] SOFTWARE ENGINEERING
OF BHARATHIAR UNIVERSITY


.....
Professor and HOD


.....
Internal Guide

Submitted to University Examination held on30/3/04.....


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Internal Examiner


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External Examiner

DECLARATION

I hereby declare that the project entitled “**Activity Flow Modeling – Hire Process**” submitted to **Bharathiar University**, Coimbatore as the project work of **Master of Science Degree in Software Engineering**, is a record of original work done by me under the supervision and guidance of **Mr. M. Ramalingam** Manager, Product Specifications, HRM Solution Center, Ramco Systems Limited, **Prof. K. R. Baskaran** B.E M.S, Assistant Professor & Course Coordinator [Software Engineering] and my internal guide **Miss. P. Parameswari** M.C.A, Lecturer, Department of Computer Science and Engineering, **Kumaraguru College of Technology**, Coimbatore and this project work has not found the basis of the award of any Degree/Diploma/Associate ship /Fellowship or similar title to any candidate of any university.

Place: 30/3/04

Date: Coimbatore

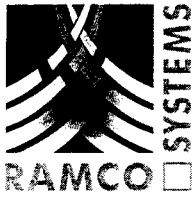


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17th Mar 2004

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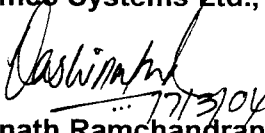
Dear Sir,

This is to certify that **Mr R Vishnu Prakash**, final year student of M.Sc., (Software Engineering) of your esteemed institution, has successfully completed the project titled "**Activity Flow Modeling - Hire Process**" at Ramco Systems, Chennai under the guidance of Mr M Ramalingam, Manager – Product Specification between **22nd December 2003 and 11th March 2004**.

We wish him all the best in his professional endeavours.

Thank You.

for **Ramco Systems Ltd.**,


Kashinath Ramchandran
Vice President, Human Resources

DEDICATED TO MY EVER LOVING PARENTS

ACKNOWLEDGEMENT

ACKNOWLEDGEMENT

I express my profound respect and sincere gratitude to **Dr. K.K.Padmanaban** B.Sc. (Engg), M.Tech, Ph.D, *Principal, Kumaraguru College of Technology, Coimbatore*, for providing me an opportunity to undergo the M.Sc [APPLIED SCIENCE SOFTWARE ENGINEERING] course and thereby this project work also.

I record my sincere thanks to **Prof Dr. S.Thangaswamy** B.E (Hons), Ph.D, *Head of the Department, Computer Science and Engineering, Kumaraguru College of Technology*, for allowing me to take up the project at *Ramco Systems Limited, Chennai*.

It's my privilege to express my deep sense of gratitude and profound thanks to **Mr. P.R.Venketrama Raja**, *Vice-chairman, Managing Director & CEO, Ramco Systems Limited, Chennai*, for having allowed me to carry out the project at their esteemed organization.

Gratitude will find its least meaning without a mention to my external guide **Mr. M Ramalingam**, *Manager-Product Specifications, HRM Solution Center*, and all my associates at *Ramco Systems, Chennai*, for all their kind guidance and encouragement towards my project work.

Words are boundless for me to express my deep sense of gratitude and profound thanks to **Mr. K. R. Baskaran**, B.E M.S, *Assistant Professor*, and my internal guide **Miss. P. Parameswari**, M.C.A, *Lecturer* and all other faculty members of *Department of Computer Science and Engineering, Kumaraguru College of Technology, Coimbatore*, who have guided me with their valuable suggestions and constant motivations during my project work.

Finally, this acknowledgement will not achieve its complete form if I don't remember my parent's sacrifices. Without their constant moral support, motivations and kind encouragements, I could not have channelised my career in the field of Computer Science.

Vishnu Prakash. R

PROJECT ABSTRACT

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Human resources are fundamental for the success of an organization, therefore it becomes imperative to attract and hire the best people.

Hiring process is an important activity in organizations to bring the 'Right Person at the Right Time for the Right Job'. **Ramco Hire Process** facilitates the full range of the process, including making requests for resources, planning for the hire process, identifying, evaluating, selecting applicants and finally inducting applicants into the organization.

Activity Flow Modeling - Hire Process

The purpose of modeling is to produce an abstraction of the business process that serves as a basis for detailed definition, study, and possible reengineering to eliminate non-value added activities. The model must allow for a clear and transparent understanding of the activities being undertaken, the dependencies among the activities, and roles necessary for the business process.

The flash previews and the ARIS illustrations generated helps to

- Communicate to prospective clients during presales
- Internal demonstration and training purpose
- Knowledge sharing
- Communicate to customer during implementation
- Share complete details of the software to partners without giving access to source code.

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INTRODUCTION

1. INTRODUCTION

1.1 Project Overview

The purpose of modeling is to produce an abstraction of the business process that serves as a basis for detailed definition, study, and possible reengineering to eliminate non-value added activities. The model must allow for a clear and transparent understanding of the activities being undertaken, the dependencies among the activities, and roles necessary for the business process.

Modeling of Hire Process Business Process Chain at various levels like

- Process Level
- Activity Level
- UI Level
- Task Level

Is carried out in the project.

Customers will be demonstrated with the available Standard Components from component repository, which enables the customer to select/modify/add new screens and choose only those requirements that fit his enterprise needs. The most admired advantage of component architecture is that customization of enterprise application is easy without touching the existing system and deploying only those packages that are required for the enterprise.

1.2 Objective

To model the Hire Process Business Process Chain and depict the flow at various levels at

- Process Level
- Activity Level
- UI Level and
- Task Level

1.3 Scope

Out of various Business Processes available in Ramco Human Resources Management Solution, Hire Process has been modeled. Flash Previews are generated as output from Solutioning Workbench along with ARIS Flows, which enables the customer to have a better understanding of the system.

1.4 Purpose

The existing working software is reverse engineered in to flows at various levels, which lets the customer to understand the business process and functionality of the standard components to a great extend. A detailed study of the existing customer environment facilitates to understand his enterprise needs and helps to integrate the existing system with the proposed solution. The flow helps during presales while demonstrating to the customer about the pre-built components and letting him to select/modify/add new fields to the user interface screens.

Since Solutioning is an Internet enabled platform is will be easy to

- Communicate with the customer via Internet
- Learn his requirements
- Model it in the Solutioning Workbench
- Paint new User Interfaces

1.5 Abbreviation

S.NO	Abbreviation	Description
1.	ARIS	Architecture of Integrated Information Systems
2.	ILBO	Internet Layer Business Object
3.	HP	Hire Process
4.	BPC	Business Process Chain
5.	RFH	Request For Hire
6.	BR	Business Rule
7.	OU	Organization Unit
8.	UI	User Interface
9.	HRMS	Human Resources Management Solution
10.	BPO	Business Process Outsourcing

1.6 Corporate Overview

Ramco Systems offers rich functionality, cost-effective seamless integration and fully web-integrated services, which helps close the gap between business objectives and IT capabilities. Established in 1989 in India, Ramco Systems has positioned itself as an expert provider of global enterprise solutions. It is part of the respected Ramco Group, founded in 1938 with international recognition for quality products and services. The company is listed on the Bombay Stock Exchange, National Stock Exchange and the Madras Stock Exchange.

Ramco Systems offers packaged solutions - Ramco Enterprise Series; and custom solutions - Ramco Enterprise Custom Solutions. Both solutions are based on Ramco VirtualWorks™ an innovative, model-based development and integration architecture.

The result: Over 1,000 customer installations across 30 countries serving 70,000 users and representing 70 different industry segments.

Quality

Ramco software development practices are ISO 9001 certified by KPMG and Y2K certified by ITAA (Information Technology Association of America) and development centers assessed at SEI CMM Level 4 - so we can be sure of their compatibility. Ramco applications are certified for use in Switzerland by Ernst & Young. Ramco Systems is an Microsoft solution provider, and is ranked among the Top 100 software companies in surveys by leading trade publications like *Manufacturing Systems*, *Computers Today*, *Dataquest*, and *START*.

Ramco Human Resources Management Solution

It offers comprehensive functionalities across the entire HRMS process spectrum

Ramco Human Resources Management Solution aligns itself seamlessly to the organization's process through its configurable structure, flexible design and powerful tools.

It is competency driven and architected to handle BPO needs. A comprehensive component is also available for managerial/ employee self-service and HR analytics.

Ramco VirtualWorks™

A unique model-based architecture for innovative software development makes this so attractive, every enterprise solution of the Ramco lineup is based on it.

Ramco has developed a breakthrough application development framework called Ramco VirtualWorks™ - a new component based platform that dramatically improves the way software is developed and deployed. Ramco VirtualWorks powerfully enables both

Ramco applications and external applications to run seamlessly across technology and organizational barriers to enable true collaborative commerce.

Ramco VirtualWorks™ is a component-based enterprise application framework for rapidly developing, deploying, and maintaining medium to large-scale multi-tier applications. It is a powerful system that can impact every area of application development – new application development, time consuming integration of legacy systems, upgrading existing applications for e-business, etc.

Ramco VirtualWorks™ enables winning business-IS alliances by providing a robust information system that eliminates the disconnect between corporate and technical managements. CIO's can now conceptualize and deliver more; enabling CEO's to better realize the organizational vision.

As a model-driven development approach, Ramco VirtualWorks™ uses a formalized, data structure based knowledge representation of business systems. Knowledge regarding all life-cycle stages of software development from specifications to deployment is stored in the form of models. This 'model' is then used to 'generate' or drive all aspects of software assembly and delivery.

Ramco VirtualWorks™ has a unique collection of models that can be used for managerial, educational and development functions. Its layered approach protects your investments in technology and application. With its life-cycle solution delivery model, significant benefits can be achieved in all key parameters such as quality, delivery, timeliness, flexibility and sustainability.

Ramco VirtualWorks™ powerfully combines standard software development practices and methodologies with a high-performance technology framework.

Quality is ensured through a built-in quality system that addresses the needs of both generic and customized applications.

Investment protection is guaranteed through a business process behavior repository that abstracts business logic and data information.

Rapid application development is ensured through code generators.

Ramco VirtualWorks™ enables a business for the Internet through three kinds of solutions that integrate the world of client server and Internet computing:

- Integrate/ upgrade legacy applications to handle the e-business requirements.
- Develop ground up applications that can adapt and scale up with the changing business requirements.
- Develop new applications that enhance existing systems and provide an integrated back office support

Ramco VirtualWorks™ uses the ‘Business Process Component’ approach, a solution that satisfies all of the above criteria and presents a sophisticated software component technology for development, deployment and interpretability. The biggest benefit of this approach is that new features can be plugged in, existing features can be removed, upgraded independently, or replaced with alternatives. By providing Business Process Componentization, Ramco VirtualWorks™ provides much-needed agility in enterprise applications.

Ramco VirtualWorks™ is a virtual enterprise platform for designing, developing and deploying enterprise applications that precisely fills this gap between business requirements and technology architectures and empowers you with several critical capabilities:

- Build completely new solutions from ground up.
- Develop systems that can continuously be adapted, changed and configured in accordance with ever-changing business needs.
- Handle large IT projects across their entire life cycle, involving consulting and SDLC stages.

- Employ sound software engineering practices to deliver predictable systems.
- Develop quality applications for the estimated time and cost.

Very importantly, Ramco VirtualWorks™ will not disturb existing systems. The data requirements can be met through two approaches – service integration and data integration.

Ramco VirtualWorks™ enables businesses integrate and extend existing investments in computing hardware and software, allowing them to 'build out' rather than replace their legacy systems and other third party applications.

Customers

Ramco enterprise solutions run at over 1000 customer locations worldwide. Ramco systems integration customers include the largest corporations in India. Software professionals from Ramco consulting services are associated with on-site and off- shore development projects at companies in North America, Europe and Asia ranging from Fortune 500 corporations to Internet startups. Ramco real time solutions are implemented at several process plants in India.

SYSTEM STUDY AND ANALYSIS

HIRE PROCESS

2.1 Overview

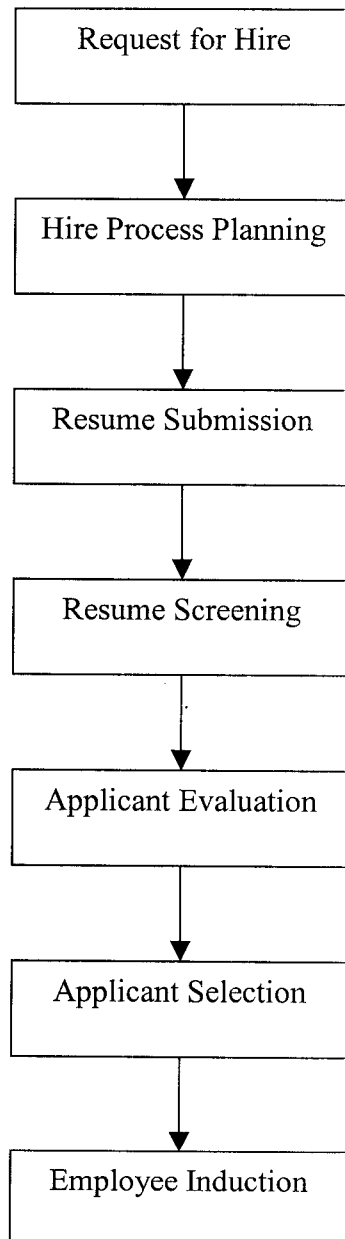
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Hiring process is an important activity in organizations to bring the 'Right Person at the Right Time for the Right Job'. **Ramco Hire Process** facilitates the full range of the process, including making requests for resources, planning for the hire process, identifying, evaluating, selecting applicants and finally inducting applicants into the organization.

Ramco Hire Process supports the following:

- Regular Hire Process
- Quick Hire Process
- Re-Hiring of an ex-employee
- Hiring internal employees against a vacancy
- Hiring applicants referred by employees of the organization.

2.2 A Typical Hire Process



2.3 Details of the Hire Process

➤ **Request for Hire**

The hire process is initiated on raising a request for hire. This request specifies the details of the job vacancy and the requirements for the job.

➤ **Hire Process Planning**

This involves identification of the sources of applicants and defining the evaluation process.

➤ **Resume Submission**

Resumes are submitted against the vacancy both by external applicants and internal applicants (employees).

➤ **Resume Screening**

Resumes are screened based on certain criteria to identify suitable applicants.

➤ **Applicant Evaluation**

The short listed applicants are evaluated and if found suitable, are recommended for selection.

➤ **Applicant Selection**

The applicant is selected, and the salary fitment and joining formalities are completed.

2.4 Key Concepts

The following are the key concepts of **Ramco Hire Process**:

- Request for Hire
- Recruiter
- Assessor

- Panel
- Sourcing Method
- Venue
- Stage
- Exercise
- Resume
- Screening of Resumes
- Internal Applicant
- Employee Referral
- Applicant Evaluation
- Applicant Selection

Request for Hire

The hire process is initiated on a “Request for Hire” made by the Line Managers. Alternately, HR personnel can also raise the request on behalf of the Line Managers.

For each request for hire, the organization can reserve certain percentage/ numbers of vacancies for specific categories of applicants including sportsmen, ex-servicemen and differently abled persons.

Recruiter

Some employees in an organization can be designated as recruiters, with each recruiter being responsible for a specific area. For example, one recruiter can be assigned to handle recruitment of junior and middle management staff while another can be assigned to handle recruitment of senior management staff. Some other organizations may require separate recruiters for a specific line of business, like a recruiter for software division, recruiter for telecom division, and so on. The recruiter will be responsible for sourcing, evaluation and selection of applicants for a request for hire.

Assessor

In the hire process, the assessor's role is very crucial, as this role evaluates the suitability of the applicant for the vacancy. Assessors can be internal or external to the organization.

The name, address, organization where currently employed, job details, qualification, experience and competencies possessed by the external assessors can be captured in the system.

Panel

When applicants are to be jointly assessed by a group of assessors, then a panel can be formed specifying the members (assessors) of the panel.

“Panel for Selection of Senior Management Staff”, “Panel for Group Discussion Assessment”, “Panel for Technical Assessment” are typical examples of panels.

Sourcing Method

The recruiter decides the sourcing of applicants for a request for hire. It is important to choose the correct sources to ensure a good response from the suitable applicants at the right time. Staffing agency, advertisements, website, employee referrals, internal selection are the typical source types which are predefined in the system.

Source types can be categorized as one of the following:

Staffing Agencies

Staffing agencies provide resumes of applicants for the job specifications as provided by the organization. Example- Consultancy

Non-staffing Agencies

These sources are used to advertise vacancies. Advertising agencies and job portals are typical examples of non-staffing agencies. In response to the advertisement, an external applicant submits his/her resume.

Others

The details of the vacancy are made known to the employees of the organization. Internal selection and employee referrals are the source types of this category.

The sourcing type can be defined as per the needs of the organization. For each type, the specific sources can be specified. For example, ‘Head Hunters’ and ‘ABC Consultants’ would be defined as the sources for sourcing type “Staffing Agency”.

The organization Website, “Monster.com” would be an example of the sources for the source type Website.

If the sourcing type is internal selection or employee referral, then the employee through the self-service option provided in **Ramco Hire Process** can view the request for hire details.

For each source, the contact details, agreement terms, and the service period can be specified. For the source type, Staffing Agency; three login accounts can be allotted to Ramco Human Resources Management Solution. Using these accounts, the Staffing Agency can enter the resume of applicants.

Stage

The hire process for a request for hire will involve one or more stages of assessment with each stage consisting of multiple exercises. On clearing one stage, the applicants move to

the next stage. Preliminary assessment, detailed assessment and final selection are typical examples of stages of selection.

The stages could vary for each request for hire. Preliminary assessment, psychological test, detailed test and final selection would be typical stages for selection for management trainees; while preliminary assessment and final selection would be the typical stages for selection for senior Managers.

Alternately, the organization can also plan for assessment using only exercises instead of stages. If the assessment is done using exercises, then the applicants are selected from one exercise to another.

Exercise

Exercises are means of assessing the applicant's knowledge and competencies. Typical exercises are 'Written Test', 'Group Discussion', 'Functional Interview', 'Personal Interview', and 'Final Interview'.

Exercises can be defined for an organization based on its requirements. These exercises can be used across various stages for each hire request. While defining an exercise, the objective of the exercise and the competencies that can be assessed are specified.

For example, the exercise "Group Discussion" would help assess the competencies of initiative, contribution as team player, communication skills, and leadership qualities.

Venue

Venues for conducting the evaluation exercises can be internal or external to the organization. External venues are those that are rented out by the organization.

Infrastructure details such as computers, projectors, photocopying machine, chairs, screens and whiteboards available at the venue can be captured. The cost per unit of infrastructure can also be captured.

For external venues, in addition to infrastructure, details including the organization, address and contact person can be captured. The venue information facilitates the recruiter to plan the hire process based the infrastructure available.

Resume

Resume is the applicant's profile of personal details, qualifications, experience, competencies, preferences and other particulars. Resumes can be submitted directly by the applicant (or) by a referral employee (or) by staffing agencies.

In the **Ramco Hire Process**, there is a provision to submit a short resume in addition to a detailed resume. While submitting a detailed resume, applicants can save the draft resume and later amend and submit as final resume.

The following can be specified in the resume:

- Personal Information
- Addresses for Communication
- Education Details
- Experience Details
- Competencies Possessed
- Languages Known
- Reference Information
- Preferences of the applicant.

The resume submitted by an applicant is identified with a unique 'Resume ID' specified by the applicant. The applicant can access his/her resume with help of this ID and 'Password'.

The resume ID and password will serve as logon credentials for the applicant to access his/her resume for making amendments. The applicant can submit a resume for a specific vacancy available in the organization or can submit a general resume that will be considered for any suitable vacancy.

An employee can apply for the vacancies marked as available for internal employees. The resume of the employee is automatically generated based on the personal and employment information existing in employee records of Ramco HRMS Foundation.

Screening Resume

Applications against a vacancy are required to be screened to identify the candidate suitable for the vacancy. Screening criteria can be specified in the **Ramco Hire Process**. Multiple levels of screening can be performed for a request for hire.

Screening can be performed on one or more of the following criteria:

- Qualification(s) of applicant
- Experience – total and relevant
- Age of applicant
- Willingness to travel
- Category of applicant
- Type of Industry where the applicant has had experience
- Organization where the applicant is currently employed.

In addition to the resumes submitted against the request for hire, one or more of the following can also be specified for the screening:

- General Resumes
- Rejected Resumes
- Resumes posted against other hire requests.

The screened resumes can then be marked as:

- Short-listed - the short-listed applicants will move to the evaluation stage.
- Rejected
- Transfer to General Resume- the resume will be available in databank and can be used for other hire requests.
- Next Level Screening- the resume will go for another round of screening.
- Deleted- the resumes will be deleted from the resume databank.

Quick Hire

Through “Quick Hire”, one or more applicants can be directly moved to the selection stage by skipping the evaluation stages. At the selection stage, these employees can then be selected or waitlisted or rejected.

Internal Applicant

Internal applicants are employees who apply against vacancies available in the organization. If the organization plans to recruit internal employees for vacancies, then employees can view these vacancies. Interested employees can then submit their resumes against these vacancies. **Ramco Hire Process** simplifies the process of an employee applying against these vacancies, by automatically generating the employee’s resume. The resume of the employee is created based on the personal and employment information records available in Ramco HRMS Foundation.

Employee Referral

Employee referral is a yet another sourcing supported by **Ramco Hire Process**. On setting employee referral as a source for a request, the employees will be notified. Employees can then submit the resumes of their referred candidate(s).

Applicant Evaluation

Applicants are evaluated after each exercise. The score obtained by the applicant at Exercise level (Simple Evaluation method) or at Stage level (Detailed Evaluation method) facilitates the recruiter in selecting the applicants for the next exercise or the stage.

Applicant Selection

Selection is the final stage in the hire process. Applicants are selected and salary fitment is done for these selected applicants. Other joining formalities like medical fitness, reference checks and document verification are done in this stage.

An applicant can be selected for the job for which the request has been raised or for any other job for which the applicant is suitable.

2.5 Hire Process

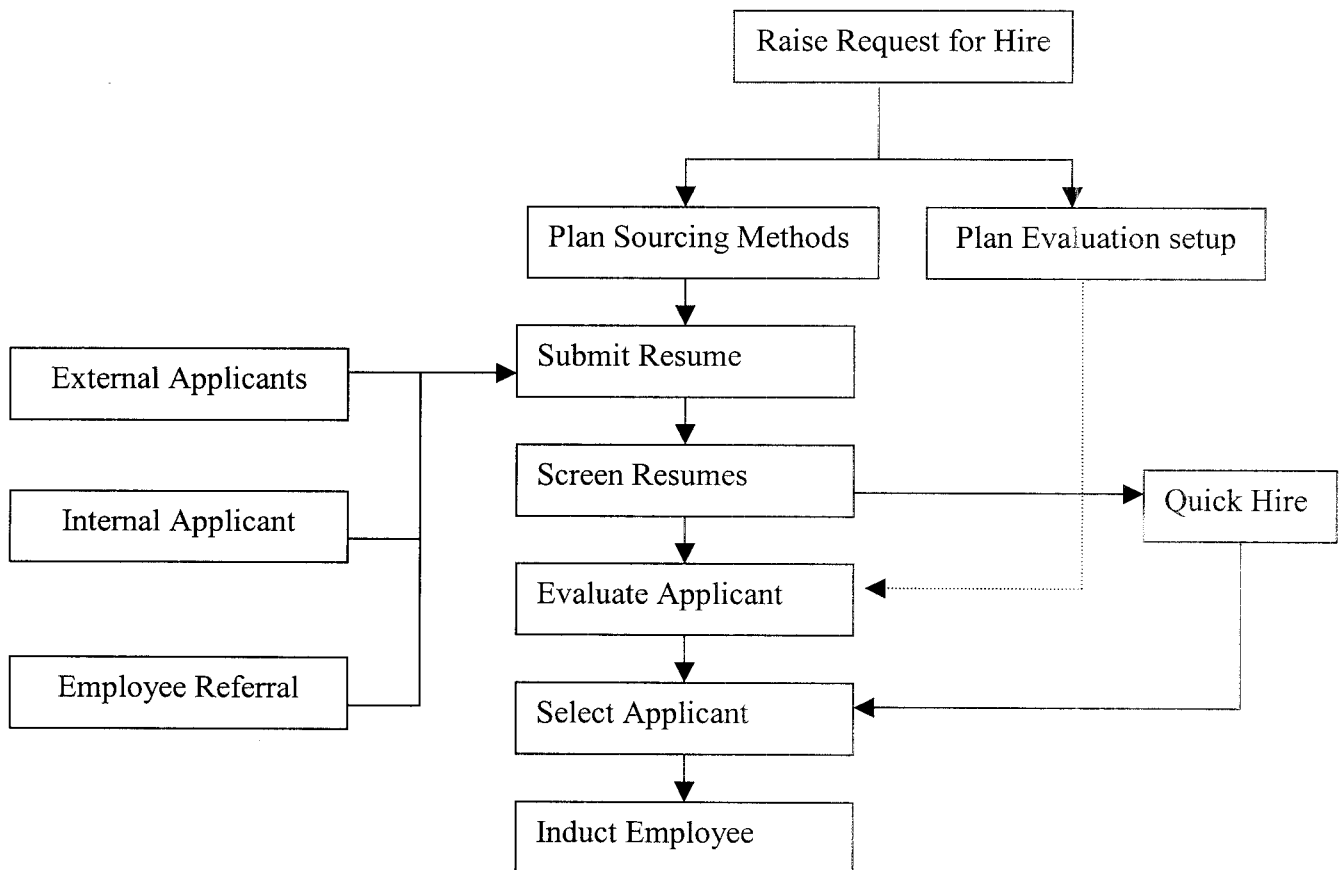
This sub-section explains in detail the steps and features of the **Ramco Hire Process**.

The steps in the hire process include:

- Raising a request for hire
- Planning the hire process
- Applying against the vacancies
- Screening resumes of applicants

- Evaluation of applicants
- Selection of applicants

Process Flow



The Process Overview

The hire process is initiated on raising a request for hire. On a request, the planning activities begin, which involves deciding on the sourcing and evaluation methods. The vacancy details will be published to external and/or the internal applicants depending on the sourcing methods decided. The resumes submitted against the vacancy will be screened; applicants will then be scheduled for exercises. Applicants will be evaluated and recommended for selection process. For the selected applicants, the salary fitment

and joining formalities will be done and the applicant will be inducted into the organization.

Prerequisites

The positions or the jobs in various departments should be defined for raising a request for hire. The essential requirements of the position /job in department in terms of qualifications and competencies should be defined.

Process Steps in Detail

Raising the Request For Hire

The 'Request for Hire' is the heart of hire process. Planning, screening, evaluation and selection of applicants is done for a request for hire. A request for hire is raised for a vacancy of one or more posts. Every request is identified by a serial number generated by the system.

The following details need to be specified for a request for hire:

- The employment unit, where the vacancy exists.
- The work location of the employment unit where the vacancy exists.
- Date of request as provided by the system.
- The date by which the vacancy should be filled.
- The total number of posts to be filled.
- Position for which personnel are required or the job and department for which personnel are required.
- Total work experience required for the vacancy.
- Relevant work experience required for the vacancy.

- Qualifications required- these are the qualifications required for the specified position or the job. Additional qualifications required for the vacancy can also be defined. Two alternative qualifications each of these can be specified.
- Competencies required- these are the competencies required for the position or the job and department . These can be modified for the request.
- Allotment of the posts for the various categories of applicants- The requestor as per the policies of the organization or the local governing bodies can make allocation of the number of posts to various categories.
- Employee Type– whether regular, non-regular employee and so on.
- Any other requirements.
- The job description that can be posted in the websites, dailies, advertisements.
- Reason for Hiring– whether for replacement, expansion of business/branch or any other such reason.
- The recruiter- for each request for hire, the recruiter should be identified. This can be done either by the requestor or by the authorizer.
- Type of industry/ sector to which the applicant should belong.

The following are the other details that would take default values from the position/job definition. These can be modified for a request.

- Medical check requirements
- Standard hours of work
- Whether tipped
- Whether requires mobility
- Whether full time or part time

Hire Process Planning

The hire process planning done for every request for hire will involve the following:

- Identification of the sources
- Defining the evaluation set-up
- Scheduling of exercises

- Allocation of vacancies across the various categories of applicants (if not done as part of the request)
- Assigning applicants to the exercises

Identification of sources

The various sources of applicants for the request for hire can be identified. For each source, the following information should be specified:

- The number of applicants required
- Date on which the job requirements were forwarded
- Date by which the applicants are required.

Evaluation Set up

The definition of evaluation set up for a request for hire will involve the following:

- Specifying the stages and the weightage of each stage, and the order of sequence of the stages.
- Specifying the exercises within each stage and the weightage of each exercise.
- Specifying the competencies that can be assessed by the assessor and the weightage of each competency
- Scheduling the exercises, by specifying the date, time and venue.
- Identifying the assessors/panels for a scheduled exercise and the weightage of each for assessor/panel.

A recruiter can define a new evaluation set or can use a pre-defined standard evaluation set and make the necessary changes as required.

The weightage specified for each stage/exercise/competency/assessor will be displayed in percentage. The following example shows the weightage of the 4 stages of evaluation for a request for hire in percentage.

Stage	Weightage Specified	Weightage in %
1	2	25%
2	2	25%
3	3	37.5%
4	1	12.5%

If no weightage is specified for the evaluation set up elements (stages/ exercises/ competencies/ assessors), then the system will assume equal weightage for all the elements. For example if no weightage are specified for the stages of an evaluation set up, then the system will assign equal weightage to all the stages.

Simple Evaluation Setup

In a hire process, instead of a detailed evaluation set up, a simple evaluation setup can be planned. A simple evaluation set up will not involve stages, but only exercises. Simple evaluation set up would involve:

- Specifying the exercises and weightage of each exercise and the sequence of the exercises
- Scheduling the exercises by specifying the date, time and venue and identifying the panel (or) assessor for the exercise
- If required, specifying the competencies to be assessed in each exercise.
- Assigning applicants to the exercise.

Differences between a detailed and simple evaluation set up

Parameter	Detailed Evaluation Set up	Simple Evaluation Set up
Stages	The basis of evaluation is stages, each stage consisting of exercises. On clearing one stage, an applicant will move to the next stage.	The basis of evaluation is exercises. On clearing one Exercise, an applicant will move to the next exercise.
Exercises	Exercises and the weightage of each exercise for a stage can be planned.	Exercises and the weightage of each exercise for a Request for Hire can be planned. The sequence of the exercises can be defined.
Assessors	Multiple Assessors can be planned for an exercise.	Only one assessor can be planned for an Exercise.
Venue, Date and Time	An Exercise can be scheduled in multiple venues on multiple dates and multiple time slots.	An Exercise can be planned in only one Venue. The Exercise will be scheduled for a period – from the specified Start date to the end date.

Vacancy Allocation

In vacancy allocation, a percentage/ number of total posts are allocated for different categories of applicants as per the companies policy or government regulations, if any.

Assigning Applicants to the Exercises

In the detailed evaluation set up, the short listed candidates (from the previous stage) would be assigned to the exercises of the current stage. For each exercise, it is possible to assign all the applicants to one single venue on a single date.

In simple evaluation set up, the short listed applicants would be assigned to the next exercise.

Resume

The following options are available for an external applicant while submitting his/her resume:

- The applicant can post his /her resume against a specific vacancy or can submit a ‘general’ resume which will be considered for any suitable vacancy.
- The applicant can choose to submit a “short resume” or a “detailed resume”.
- The applicant can save his/her resume as ‘Draft’, update it and submit it as the final copy, where it will be available for evaluation.

Resume details

The following are the details that an applicant should provide in the resume:

User Information: The applicant should specify a

- Resume ID
- Password,

Both of which will be used as login credentials.

Personal Information:

- Name (First, Middle and Last Name)
- Date of Birth
- Country of Origin
- Marital Status
- Height & Weight
- Whether ex-employee and
- Category.

Contact Information:

- Address
- Phone numbers
- Fax numbers
- Mobile number
- Email ID
- Home Page information.

The contact information is required to inform the applicants of the schedules.

Educational Qualification: Three of the applicant's highest/relevant educational qualifications including,

- Qualification Title
- Specialization
- Institution
- Year of Passing
- Major
- Minor

- Score
- Maximum score.

Work Experience: The applicant's total and relevant months of experience with respect to the vacancy can be specified. The following details pertaining to three latest/relevant jobs held by the applicant can be specified:

- Period for which job held
- Organization where working or worked
- Industry Type / Sector to which the organization belongs; whether it represents manufacturing sector, service industry, and so on.
- The organization type; whether Public Limited, Private Company, and so on.
- The designation held by the applicant in the organization
- The location where the applicant was located
- Gross annual compensation received by the applicant
- Job responsibilities in the Job held

References: The applicant can provide the following details of three references:

- Name
- Designation
- Organization
- Contact Information

Note: For a 'Short Resume', only one educational qualification, one work experience and one reference may be provided.

Identification Information:

- The details of identification documents including driving license, passport, family card.

Competencies

- The list of competencies possessed by the applicant.

Languages Known

The applicant can specify the languages known with the level of proficiency.

Preferences: Applicant can specify any preferences if any, such as:

- Job Type; whether regular/temporary
- Industry type/sector
- Location
- Willingness to travel
- Date from when available
- Expected annual gross compensation
- Any other preferences.

Posting Resume against Vacancy

The following options are available for posting a resume against a vacancy:

- Applicant can view the vacancies that exist in the organization and submit a resume against a vacancy.
- Applicant can resubmit a resume after editing.
- Applicant can post the same resume against any number of vacancies
- Applicant if required can change password of the resume.

Application ID

In the Ramco Hire Process, each application submitted is assigned a unique application ID of length 26 characters. The ID is of the format XX/XXXX-XX – XX/XXXX/XXXXXXXX where the

- Characters 1-2 represent the type of resume, the representation being as follows:
 - 01 for Internal Resume
 - 02 for External Resume
 - 03 for External Resume through Staffing Agency
 - 04 for External Resume through Employee Referral.
- Character 3 is the delimiter /
- Characters 4-7 represent the year ...for example, 1999
- Character 8 is the delimiter -
- Characters 9-10 represent month... for example, 01, 02, 03, etc.
- Character 11 is the delimiter -
- Characters 12-13 represent dates... for example, 29, 30, 31
- Character 14 is the delimiter /
- Characters 15-18 to represent Organization Unit where the resume has been submitted
- Character 19 is the delimiter /
- Characters 20-26 represent the running serial number of the resumes submitted during a day.

Internal Applicants

Applying Against a Vacancy: The recruiter, when planning for a request for hire, can define internal applicants (employees) as a source type and also indicate the employment units where the vacancy can be viewed. Employees of these employment units can apply against these vacancies using the self-service option.

For employees, the resume is automatically generated from the employee's employment and personal information. This resume can be viewed as well as modified by the employee. On choosing to modify the resume, the resume will be automatically be updated with the personal information. For example, if an employee acquires a qualification, he will be required to add it in his personal information, to make it be available in his resume.

Authorization of Application: An application for an existing vacancy will be available for the screening and down the line processes only after it has been authorized by his/her supervisor.

Confirmation of Participation: An employee can view the status of the applications made against vacancies – whether authorized or rejected. If the application is authorized and if the employee has been scheduled for evaluation, then the employee can confirm participation/ non-participation using the self-service option.

Employee Referral

Employees can also submit applications on behalf of external applicants for a vacancy existing in the organization. Employees can view the list of vacancies which are marked for employee referral and submit a resume for the external applicant. The resume ID and the password can then be forwarded to the external applicant, who can then subsequently use the same to log into the system as an external applicant and update his/her resume.

Screening Resumes

The first level of short listing for a request for hire is done by screening the resumes received from the various sources. Screening can be done multiple times either by single or different users. Typically, the recruiter and the requestor for the hire will do the resume screening.

The resumes considered for screening for a request for hire can be specified to be one or more of the following:

- Resumes posted against the request for hire
- General resumes
- Rejected resumes
- Resumes posted against other requests for hire
- Internal (employee resumes) or external resumes.

The recruiter can specify the following criteria for screening the resumes for a request for hire:

Qualification: The qualifications that an applicant should possess .For each of these qualifications the alternate qualification can also be specified. For example, Bachelor of Technology can be specified as an alternate qualification for Bachelor of Engineering.

The Minimum Percentage: The minimum marks /percentage that an applicant should score for each of the qualifications.

Total Months Of Experience: The total months of experience of the applicant.

Relevant Work Experience: The total months of relevant work experience of the applicant.

Industry Type/Sector: The preferred work background of the applicant.

Work Experience for selected industry (months): The months of experience the applicants should possess in the desired industry.

Competency Count: Competency count is the number of the competencies specified for the job that the applicant possesses.

Competency Ratio: This is the ratio of the competencies possessed by the applicant to the number of competencies specified for the job. For example, if the number of competencies required for a job is 10 and if the recruiter specifies the required ratio as one, then it implies that applicants who possess all the 10 competencies will be short-listed.

Category: Specific category of people whom the organization wishes to hire; for example, differently abled, ex-service men and so on.

Age: The applicants' age in years.

Mobility: The willingness to travel.

Organization Name: Organization from where applicants are preferred.

Identification Document: Specific identification documents. For example, in a job that requires traveling, passport is an essential document that the applicant should possess.

The screening criteria specified by the user can be saved and used for screening other requests for hire. For example, a screening criteria defined for a manager can be used for screening all managerial positions.

Each of these screened resumes can now be:

- Short-listed– these resumes will be available for scheduling to exercises.
- Marked for another level of screening – these resumes will be forwarded for the next level of screening.
- Transferred as general resume– these will be moved to the resume data bank of the organization to be considered for any other suitable vacancy.
- Rejected– these will be rejected for the request for hire and will be available in the rejected resumes data bank.

- Deleted- these resumes will be permanently deleted and will not be available in any of the resume data banks.

Assigning Applicants to Exercises

Exercises can be scheduled for those applicants who have been short-listed through the resume screening. The date, time, venue and the assessor of each exercise can be specified.

Applicant Evaluation

Evaluation can be done on-line by the assessors. Alternatively, the recruiter can also enter the evaluation details on behalf of the assessor.

Once the evaluation process is defined, the exercises are conducted and the applicants are evaluated/rated. The rating could either be a grade or a numeric rating.

The applicants can be evaluated at the following levels:

- The exercise level.
- The competencies addressed by the exercise- based on the weightage specified for each competency, the overall score of the exercise is derived.
- The competency element of each competency- based on the weightage specified for each element, the overall score of each competency is calculated. The scores of each competency in turn will be used to calculate the score of the exercise.

If the evaluation is set as simple evaluation, then the score obtained in an exercise will be used to select and sent to next level of evaluation or sent for selection.

If the evaluation is set as detailed evaluation, then the scores of the individual exercises in a stage along with the weightage will be used to compute the consolidated score of the applicant at the stage. Based on this consolidated score, applicants are selected to next level of evaluation or sent for selection.

Applicant Selection

The applicants who have cleared all stages of evaluation and are short-listed; and those applicants who have been identified for 'Quick Hire' will be available for selection. The recruiter can either select or waitlist or reject the applicant during this selection stage.

The applicant can be selected for the position as specified in the request for hire or any other position as desired by the organization. For example, an applicant who has applied for the post of a marketing manager may be selected for the post of senior manager marketing, if found suitable.

The selection done by the recruiter will then be forward to an authorizer for final acceptance. This authorizer would usually be the employee who has raised the request for hire.

Salary Fitment

The selected applicant's salary fitment is done based on the salary drawn by the applicant in the previous job and internal equity.

Internal equity can be checked for one or more of the following equivalent criteria:

- Position/Department and Job.
- Job Level.
- Grade Set, Grade.
- Qualification.
- Experience.

The recruiter can specify the following other details of the salary fitment:

- The currency of payment
- The rated & payment frequency
- The base salary and the scale.
- Other earnings and deductions- the gross pay and the annual gross pay will be derived from these elements and the base salary.
- The annual gross pay- if the earnings and deductions are not specified.

Applicant Joining

The **Ramco Hire Process** offers the following joining formalities:

- Recording medical tests conducted
- Reference checks done
- Document verification done
- The expected date of joining of the employee.

If selected applicant is a new-hire, then the applicant will be assigned an employee code and the assignment will be created for the employee.

If the applicant is re-hire, then the applicant can be assigned the same employee code which was assigned to the employee during the previous employment in the organization. Alternatively, the applicant can be assigned a new employee code. An assignment will be created for the employee.

If the selected applicant is an employee, then the existing assignment details of the employee will be edited to reflect the changes in the position or job/department.

2.6 Components and Activities

Components are self-contained independent units that represent and execute the software implementation of an “autonomous” business concept. The following are the components of **Ramco Hire Process**:

- Request for Hire
- Hire Process Planning
- Resume
- Screening
- Applicant Evaluation
- Applicant Selection

The actions that can be performed in each component are referred to as Activities. For example, the following activities can be performed in the “Resume” component:

- Post Resume
- Post Resume against a Vacancy
- Change Password
- Edit Resume

The list of activities under each component of the **Ramco Hire Process** are given below.

Request for Hire

Activity	Description	Typical User
Request for Hire	Line Managers can raise a Request for	Line Managers

Activity	Description	Typical User
	Hire by specifying the requirement.	
Edit Hire Request	Line Manager if required can edit a request submitted earlier.	Line Managers
Record Hire Request	HR User can raise a Request for Hire on behalf of the Line Managers.	HR User
Edit Recorded Hire Request	HR user if required can edit a request submitted earlier.	HR User
View Hire Request	All requests for hire submitted by HR User / Line Manager can be viewed	HR User/ HR Manger/ VP HR
Authorize Hire Request	Using this activity the Requests for Hire submitted by the Line Managers/HR users can be authorized.	HR Manager/ VP HR
Set Hire Request Status	Only if the status of RFH is set as "Active " will the recruitment be made against the RFH .If status of a Request for Hire is set as "Inactive " then no recruitment will be made against the RFH until the status is again set to "Active"	Recruiter

Hire Process Planning

Activity	Description	Typical User
Maintain Evaluation Setup – Simple	If for an RFH, a simple evaluation set up is required then the same can be specified.	Recruiter
View Evaluation Setup – Simple	The simple evaluation setup specified for a RFH can be viewed.	Recruiter
Maintain Evaluation Template	Detailed evaluation set ups can be pre-defined. For a RFH requiring a detailed evaluation setup one of these pre-defined	Recruiter

Activity	Description	Typical User
	set up can be used.	
Maintain Evaluation Setup	If for an RFH, the detailed evaluation set up is required then the same can be specified.	Recruiter
View Evaluation Setup	The detailed evaluation setup specified for a RFH can be viewed.	Recruiter / HR Manager/VP- HR
Record Vacancy Allocation	For each RFH The percentage / numbers of posts to be allotted for various categories of applicants can be specified.	Recruiter
View Vacancy Allocation	The allotment of vacancies for the various categories can be viewed.	Recruiter / HR Department Head
Assign Applicants to Exercise	The short listed applicants can be assigned to various exercises of the next stage as specified in the evaluation set up.	Recruiter
View Applicants Assigned to Exercise	The applicants assigned to the to various exercises can be viewed.	Recruiter / HR Department Head
Assign Applicant Sources to Hire Request	The Sources of applicants for a RFH can be specified.	Recruiter
View Applicant Sources for Hire Request	The sources of applicants for a RFH can be viewed.	Recruiter / HR Department Head

Resume

Activity	Description	Typical User
Post Resume	General Resume can be posted by an external applicant.	External Applicant

Activity	Description	Typical User
Post Resume against Vacancy	Resumes can be posted against a RFH by a external candidate.	External Applicant
Change Password	An external candidate can change his/her password.	External Applicant
Edit Resume	An external candidate can edit a Resume posted earlier.	External Applicant

Screening

Activity	Description	Typical User
Screen Resumes	Resumes can be screened for a RFH. The recruiter can specify the user for the next level of screening.	Recruiter
Screen Resumes at Next Level	The next level of screening of Resumes can be done by the user as specified in the previous level of screening. When a user at a level does not specify the next level of user the process of screening of resumes will stop and the resumes will be available for the evaluation.	Supervisors / Line Managers
View Resume for Hire Request	Screened resumes for a RFH can be viewed.	Recruiter / Supervisor / Line Managers

Applicant Evaluation

Activity	Description	Typical User
Record Applicant Evaluation	The evaluation details of an applicant selected for an exercise for an RFH will be recorded.	Assessor

Activity	Description	Typical User
View Applicant Evaluation	The evaluation details of an applicant can be viewed.	Recruiter
Select Applicants for Next Stage	The applicants for the next stage of a detailed evaluation set up can be selected.	Assessor / Recruiter
View Applicants Selected for Next Stage	The applicants selected for the next stage of a detailed evaluation setup can be viewed.	Recruiter / Assessor
Select Applicants for Next Level – Simple	The applicants for the next exercise of a simple evaluation set up can be selected.	Assessor / Recruiter
View Applicants Selected for Next Level – Simple	The applicants selected for the next exercise of a simple evaluation set up can be viewed.	Recruiter / Assessor

Applicant Selection

Activity	Description	Typical User
Perform Applicant Selection	Applicants for selection can be specified.	Recruiter
Authorize Applicant Selection	Applicant Selection can be authorized.	HR Head / Selection Authorizer
View Applicant Selection	Applicants selected can be viewed.	Recruiter / HR Head
Perform Applicant Salary Fitment	For the Selected applicants salary fitment can be done.	Recruiter
Authorize Applicant Salary Fitment	Salary Fitment prepared for the selected applicants can be authorized.	HR Head
View Applicant Salary Fitment	Salary Fitment prepared for the selected applicants can be viewed.	Recruiter / HR Head
Perform Applicant	Record the joining formalities details of an	Recruiter

Activity	Description	Typical User
Joining	applicant who has accepted the offer.	
View Applicant Joining Details	Selected applicants joined in the Organization can be viewed.	Recruiter / HR Head

PROGRAMMING ENVIRONMENT

3. PROGRAMMING ENVIRONMENT

3.1 Hardware Configuration

➤ Server Configuration

Processor Type: Pentium IV Processor

RAM: 1 GB RAM

System Clock Speed: 1.5 GHz

➤ Client Configuration

Processor Type: Pentium III Processor

RAM: 128 MB

System Clock Speed: 600 MHz

3.2 Description of Software's and Tools Used

ARIS

The theoretical basis for **ARIS** is the Architecture of integrated Information Systems: ARIS.

It is based upon an integration concept derived from an integrated view of business processes.

It reduces the high degree of complexity in the business processes by subdividing them. The subdivision into views makes it possible to describe the view contents using special methods suitable for this view, without having to consider the numerous relationships and connections to the other views.

The ARIS architecture contains the following descriptive views:

➤ **Function view**

The function view describes the functions to be performed (operations) within a company as well as their hierarchical relationships.

➤ **Data view**

The data view describes the events and conditions of a company's reference environment.

➤ **Organization view**

The organization view describes the organizational units and users within a company, as well as its relationships and structures.

➤ **Control view**

The control view describes the connections between the three individual views. The business processes are the focus of the control view.

Server Operating System: Windows 2000 Server

The Windows® 2000 Server operating system integrates Internet technologies across all services, from File and Print to advanced line-of-business application services. This helps ensure organizations can more effectively exchange information with customers, partners, and employees worldwide.

Windows 2000 Server meets the needs of a broad spectrum of users, from corporate intranets to Internet Service Providers hosting Web sites receiving millions of hits per day. Because Internet Information Server 5.0 (IIS) is fully integrated at the operating system level, Windows 2000 Server lets organizations add Internet capabilities that weave directly into the rest of their computing infrastructure. Some of the features of Window 2000 Server are as follows

- Share information more efficiently using the Web
- Create Web-based business applications
- Bring server operating system functionality to the Web
- Secure Web Services

SYSTEM IMPLEMENTATION

4. SYSTEM IMPLEMENTATION

4.1 Blueprinting

Preparing the blueprint in the platform requires a conceptual understanding of the blueprinting process.

There are two approaches towards preparing the blueprint.

1. Blueprinting for a ground up development or for new processes.
2. Blueprinting for pre-packaged solution

This manuscript confines to only the first approach – blueprinting for ground up development.

4.2 Blueprinting for ground-up development

For blueprinting, understanding of some key terminologies is required as detailed below:

Business process

A value chain in an organization to realize a given business need.

A business process consists of a set of business functions logically connected.

Example: HP-Hire Process

Business function

A business function can be defined as a set of activities performed to implement a business behavior of an organization unit.

Example: RFH - Request For Hiring

PLP - Hire Process Planning

RES – Resume
SCR – Screening
ARG – Applicant Evaluation
SEL - Selection

Activity

Activity is a subset of Functions. Set of activities will form a Function.

Example: Request for Hire

Edit Hire Request
Record Hire Request
Edit Recorded Hire Request
Authorize Hire Request

UI

UI refers to the User Interface that's being launched when the user clicks on the Activity List available on the Menu part.

Example: Request for Hire

Select Hire Request to Edit
Record Hire Request

Task

Task is the specific action that's being performed as per user request. The different types of tasks are

- Fetch Task
- Initialize Task
- UI Task
- Trans Task
- Submit Task

Business Rule (BR)

BR's endow with the Functionality of the Application.

4.3 Events

An event is a stimulus that triggers a function. A function responds to this stimulus and results in an outcome.

The stimulus is referred as an *Entry* event and the outcome as the *Exit* event

Events in a process flow are classified based on the flow characteristics and sequence of execution. The event characteristics are detailed next.

Transfer or control (TC) events are events, which hands over the 'control of information' from one business function to another business function in the process sequence.

Example:

Function Name: Request For Hire.

Entry Event: Need to Authorize Hire Request

Activity Name: Authorize Hire Request

Flow Type: Transfer of Control.

Exit Event: Hire Request Authorized for required Vacancy

Flow Type: External

External (EXT) events are events which enter/exit into the external world. External world also include external systems.

Example:

Function Name: Hire Process Planning

Exit Event: Sources of Applicant Identified.

Flow Type: External.

Information exchange (IE) events are events, which facilitate transfer of information to and fro between two business functions.

4.4 Event sequence

Start events are entry events, which trigger a business function.

Example:

Need to fill the Vacancy

Intermediate events are internal events acting upon two functions for information exchange or transfer of control.

Examples:

Need to Identify Sources of Applicants

End events are exit events to the external world or to another business process/function on completion of the required action.

Examples:

Hire Request Authorized for required Vacancy

4.5 Modeling the flows

The business process study during blueprinting consists of five levels of representation as given below:

- Process flow (Function flow in a business process)
- Activity flow (Activity flow for a given business function)
- UI flow (User Interface flow for a given activity)
- Task flow (Task flow for a given set of User interfaces)
- BR flow (BR flow for a given task)

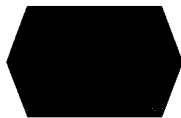
The Process and activity flow is done using a Process-modeling tool. In this document ARIS as a Process-modeling tool will be used to understand the representation.

The UI/Task/BR flows will be generated based on the User Interface layout in the Platform

4.6 Modeling using ARIS

ARIS is used to represent the Process and Activity flows for a given business process. The representation is done using the **Event Driven Process chain model** (hereafter called as **epc**).

The epc model consists of Events, Functions and Rule operator symbols (optional). The Event symbol (below) is used to represent the events in a business process.



The Function symbol (below) is used to represent the five nodes namely, Business function, Activity, UI, Task and Business Rule (BR)



Note:

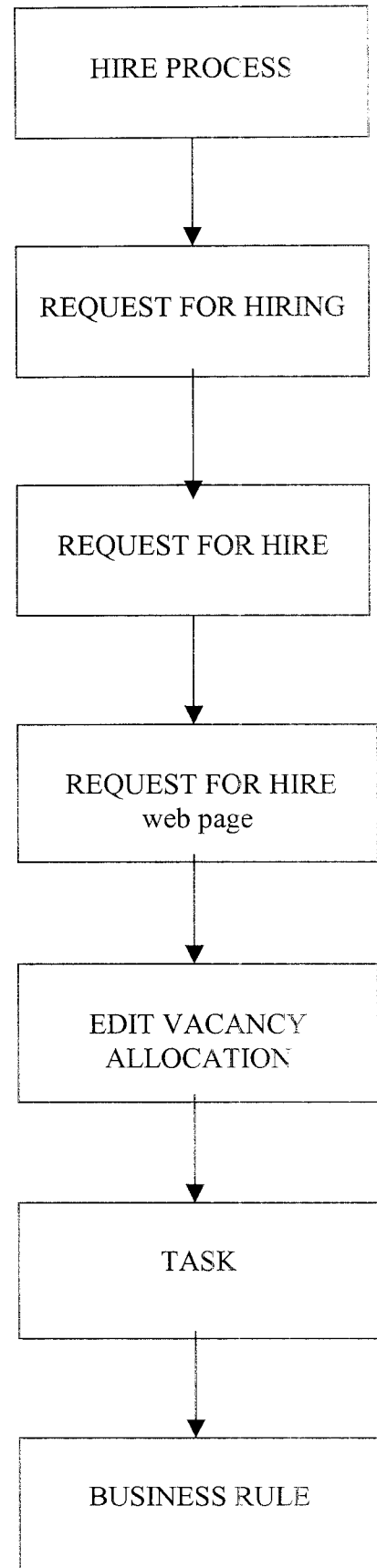
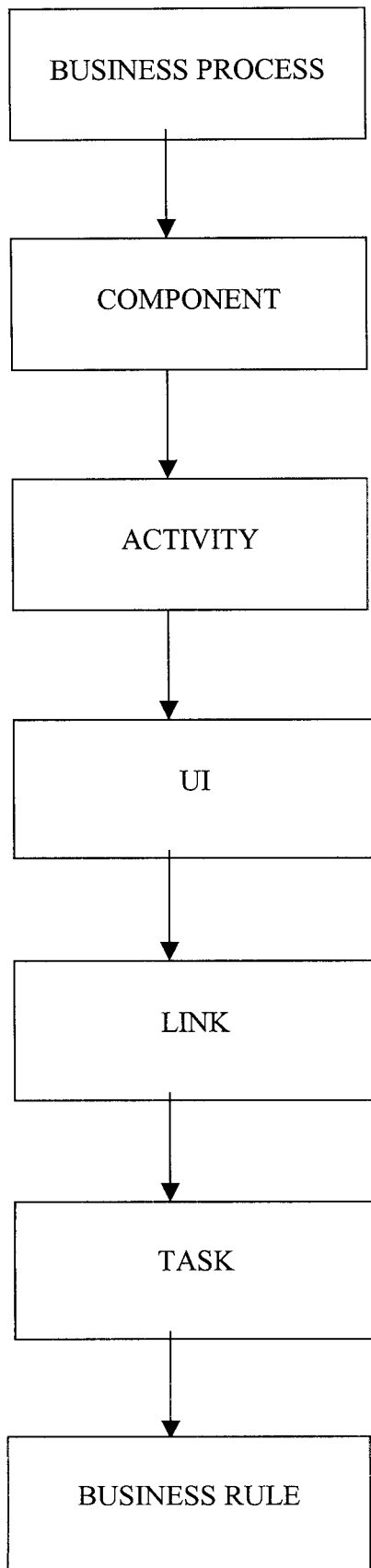
The above symbol is only a representation of the node and is an ARIS terminology to represent any processing functionality and hence used to depict the five nodes

Representation of Processes and Activity Flows

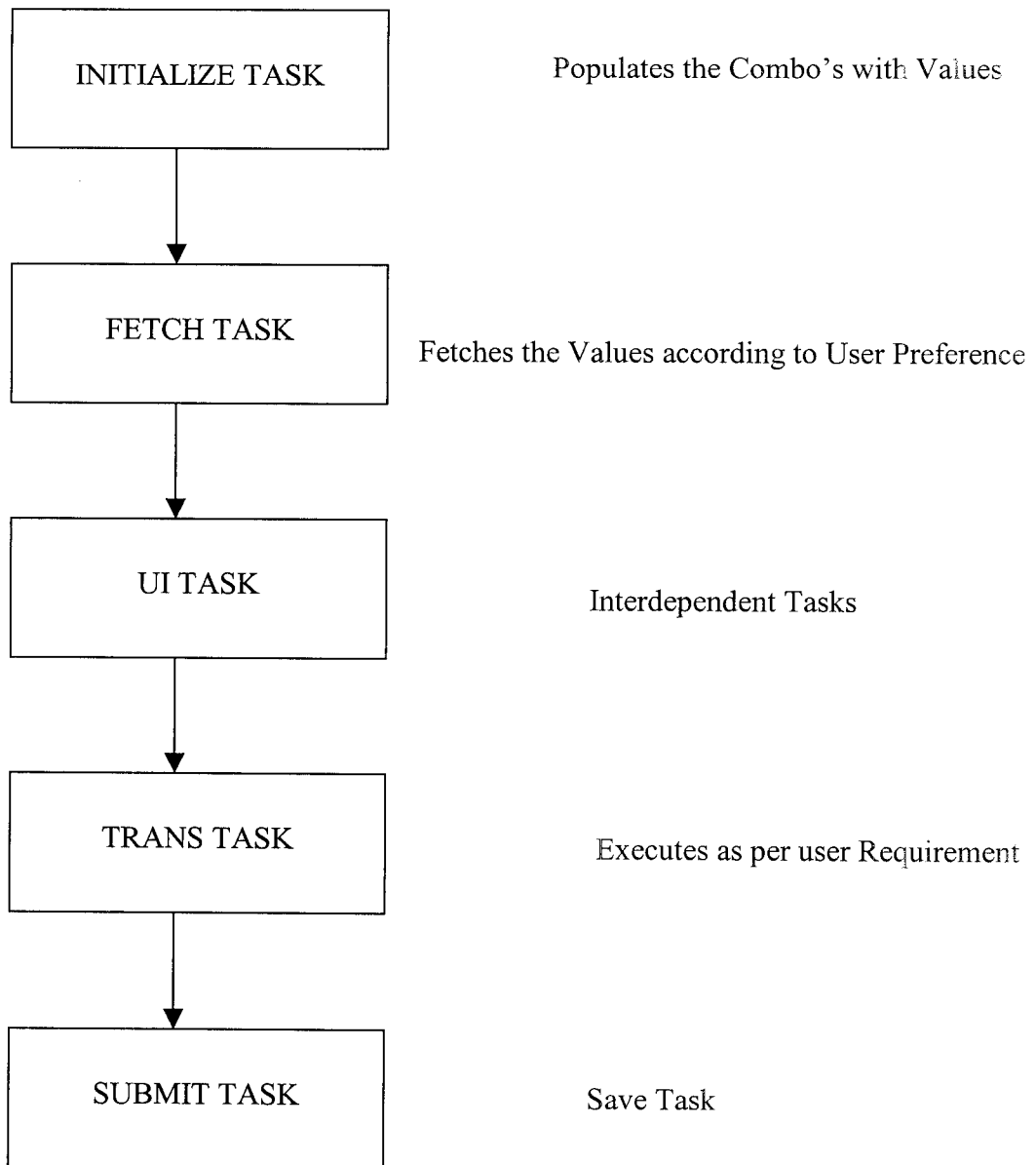
The Process flow for a given business process is represented as an epc. The nodes in this epc represent the business functions.

The activity flow for all the functions identified in the Process flow is represented as an epc. The nodes in this epc represent the activities.

4.7 APPLICATION FRAMEWORK

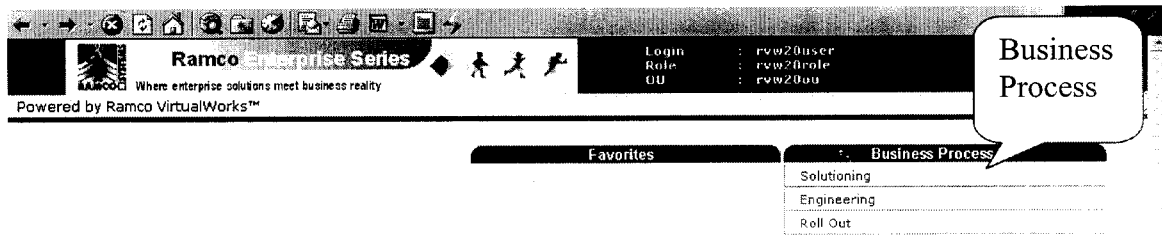


4.8 TASK FLOW



4.9 Illustration

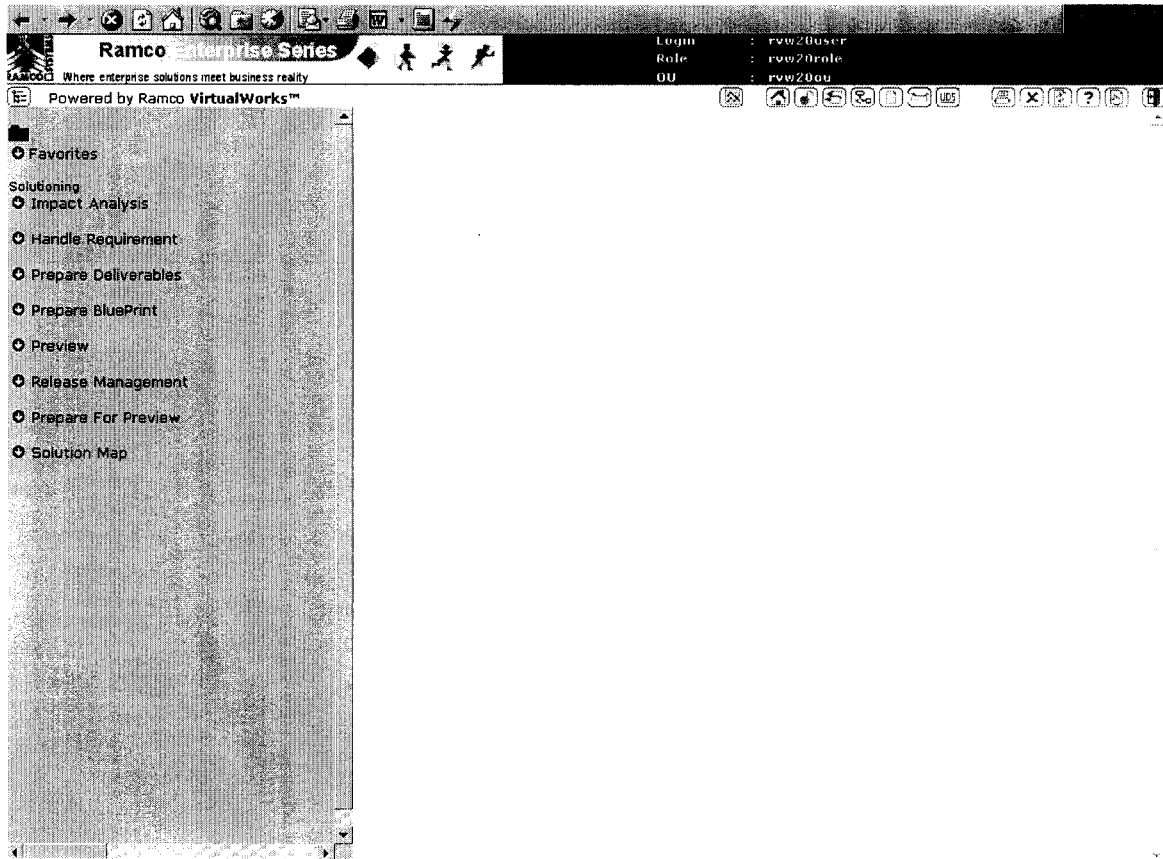
Homepage



To start solutioning, select “Solutioning” process from the business processes.

Solutioning Process Components

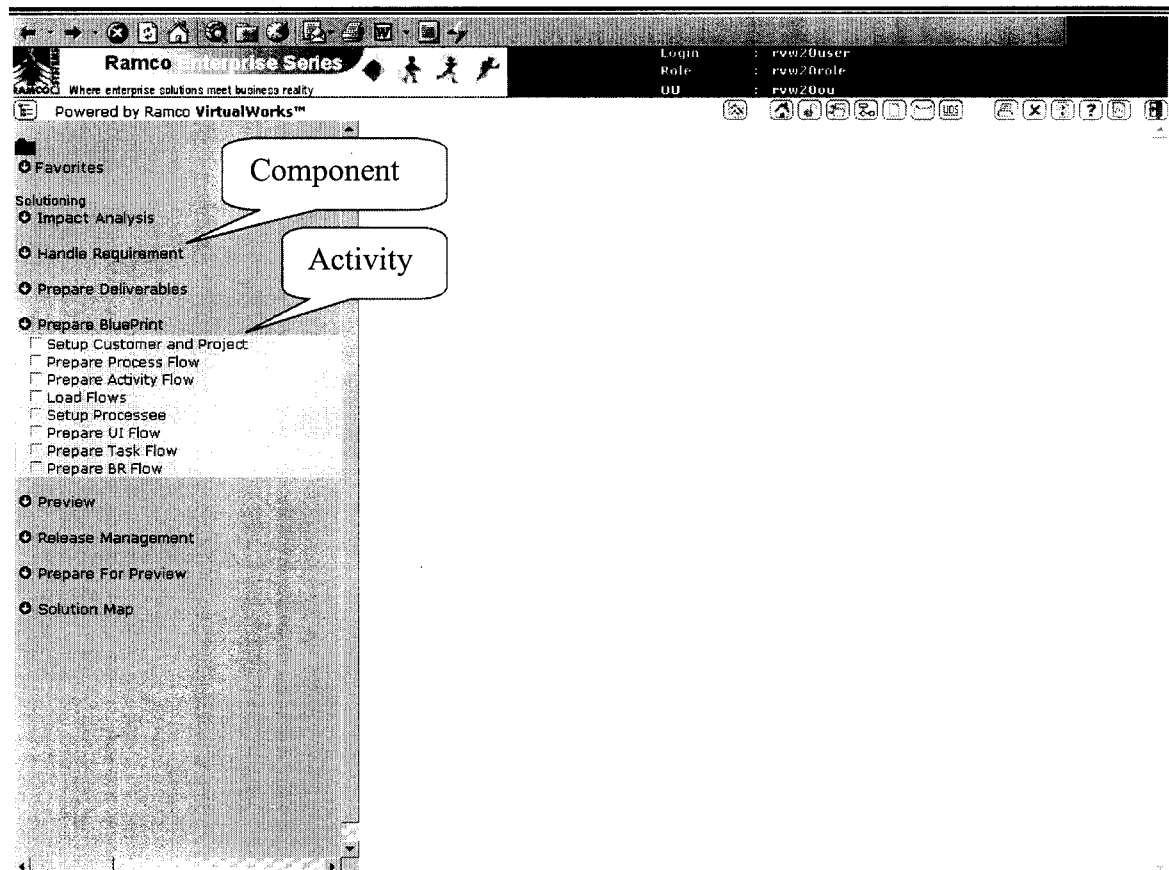
On clicking the “Solutioning” business process link from the homepage:



Left pane shows the different components that are available as part of solutioning.

Prepare Blueprint - ActivityList

To start the solutioning process for a new customer, Select Prepare Blueprint component from the left pane.



Prepare Blueprint component has the following activities:

- Setup Customer and Project
- Prepare Process Flow
- Prepare Activity Flow
- Load Flows
- Setup Processee
- Prepare UI Flow
- Prepare Task Flow
- Prepare BR Flow

Setup Customers And Project

How

To create a new customer and project, click on the Setup Customer and Project activity and enter/select the required details as below:

Click on this Lens icon for help

Powered by Rai

Setup Customer And Project

Customer Details

Customer ID Customer Name

Project ID	Project Name	Project Description	Geography	Vertical	Attached Reference Document
1 Loans	Loans	Loans	USA	Banking and Finance	None
2					
3					
4					
5					
6					
7					
8					
9					
10					

Tasks

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Project ID	Enter	Yes	Save – to save the details
Project Name	Enter	Yes	Set Default Project – to set the project as default
Project Description	Enter	No	Fetch Details – to fetch details of the customer-project combination
Geography	Select	No	Delete – the details of the customer-project combination
Vertical	Selected by system	No	
Attached reference document	Enter	No	
Model URL	Enter	No	
Proto URL	Enter	No	
Baseline Level	System assigned		

Create Business Processes

How

To create new business processes, functions and activities identified, access the “Setup Processee” activity under the “Prepare Blueprint” component. Enter/select the details below on the “Business Processes” tab:

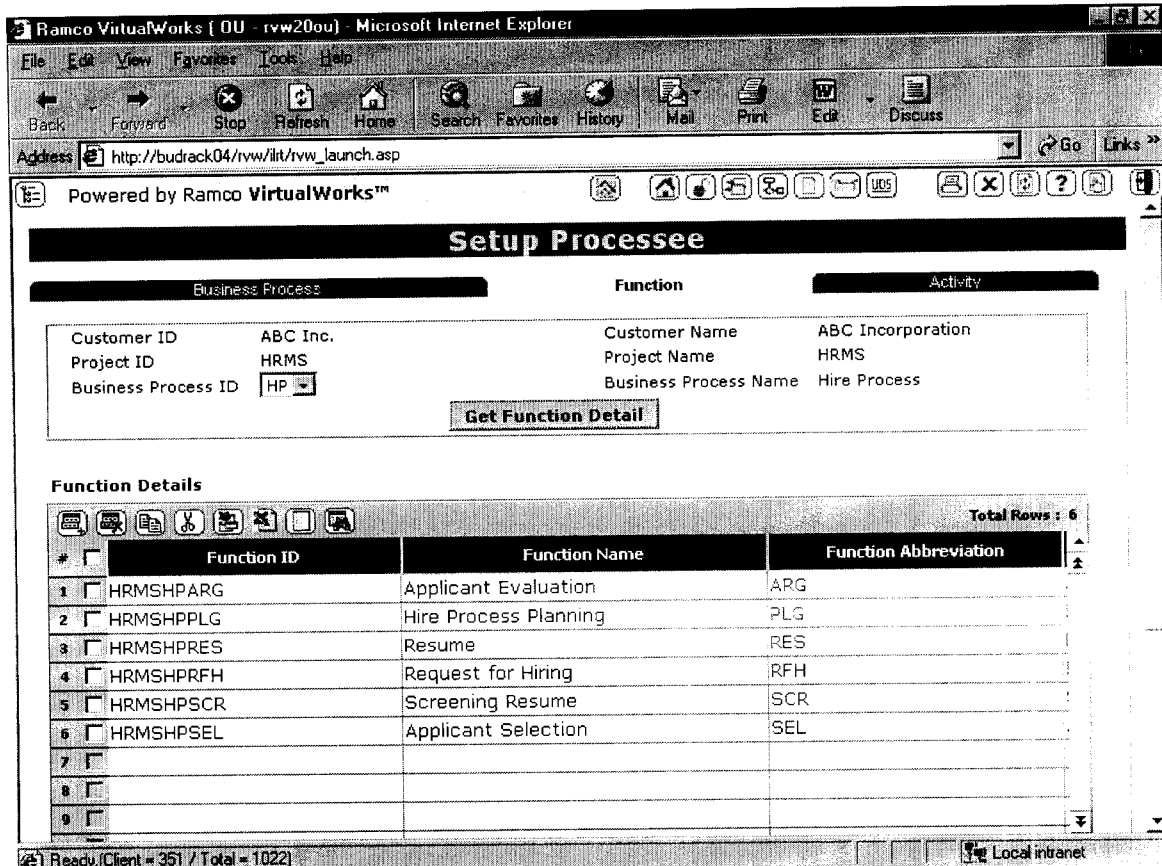
Tip

The business processes and functions and activities associated with each process are identified for a project is defined here initially. Further during the course of the Solutioning study any new processes/functions. Activities that get identified are also defined here

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Business Process ID	Enter	Yes	Save BP – to save the details entered/selected
Business Process Name	Enter	Yes	Fetch BP Details – to fetch the process details of a customer - project combination
Business Process Abbreviation	Enter	Yes	

Create Functions

How To create functions associated with each business process, click on the “Function” tab and enter/select the details below:



Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Business Process ID	Select	Yes	Save Function – to save the details entered/selected
Function ID	Enter	Yes	Fetch Function Detail – to fetch the function details of a customer - project combination
Function Name	Enter	Yes	
Function Abbreviation	Enter	Yes	
Function Description	Enter	No	

Create Activities

How

To create activities associated with each function, click on the “Activity” tab and enter/select the details below:

The screenshot shows the 'Setup Processee' web application. It features a form with the following fields and values:

- Customer ID: ABC Inc.
- Project ID: HRMS
- Business Process ID: HP
- Function ID: HRMSHPARG
- Customer Name: ABC Incorporation
- Project Name: HRMS
- Business Process Name: Hire Process
- Function Name: Applicant Evaluation

Buttons for 'Get Function' and 'Get Activity Detail' are visible. Below the form is an 'Activity Details' table with 7 rows:

Activity ID	Activity Name	Activity Description
HPARGManSExe	Select Applicants for Next Lev	Select Applicants for Next Level - Simple
HPARGManSnxS	Select Applicants for Next Sta	Select Applicants for Next Stage
HPARGModMAEv	Record Applicant Evaluation	Record Applicant Evaluation
HPARGVewSnEx	View Applicants Selected for N	View Applicants Selected for Next Level - Simple
HPARGVewSnxS	View Applicants Selected for N	View Applicants Selected for Next Stage
HPARGVewVAEv	View Applicant Evaluation	View Applicant Evaluation
IntegrationActivi	IntegrationActivity	Integration Activity

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Business Process ID	Select	Yes	Save Activity – to save the details entered/selected
Function ID	Select	Yes	Fetch Activity Detail – to fetch the activity details of a customer - project combination
Activity ID	Enter	Yes	
Activity Name	Enter	Yes	
Activity Description	Enter	No	

Load Flows – Process Level

How To load the flow of events within the processes, functions and activities identified in the above steps, click on the “Load Flows” component in left pane

Load Flows

Customer ID	ABC Inc.	Get BP	Customer Name	ABC Incorporation
Project ID	HRMS		Project Name	HRMS
Business Process ID	HP	Get Function	Business Process Name	Hire Process
Function ID	HRMSHPRFH	Get Activity	Function Name	Request for Hiring
Activity Name	Request for Hire	Get UI	Activity Description	Request for Hire
UI ID	HPRFHrRhCMMCreRenC	Get Task	UI Name	Request for Hire
Task ID	HPRFHrRhCFCrHR		Task Name	Fetchthe Request for Hire pag

[Load Process Flow](#)
 [Load Activity Flow](#)
 [Load UI Flow](#)
 [Load Task Flow](#)
 [Load BR Flow](#)

Links to other activities

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Customer ID	Select	Yes	Load Process Flow – to launch the load process flow screen
Business Process ID	Select	Yes	

Load Blueprint - Process Flow

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Load Blueprint - Process Flow

Customer ID	ABC Inc.	Customer Name	ABC Incorporation
Project ID	HRMS	Project Name	HRMS
Business Process ID	HP	Business Process Name	Hire Process
From Blueprint	<input type="checkbox"/> Yes	<input type="button" value="Get Details"/>	

#	Event Name	Event ID	Event Description
1	BPC-HP-ARG-000013	BPC-HP-ARG-000013	Need to Perform Applicant Selection
2	BPC-HP-ARG-000015	BPC-HP-ARG-000015	Applicant Evaluation Completed
3	BPC-HP-SCR-000011	BPC-HP-SCR-000011	Need to Evaluate the Applicant
4	BPC-HP-PLG-000006	BPC-HP-PLG-000006	Sources of Applicants Identified
5	BPC-HP-PLG-000023	BPC-HP-PLG-000023	Evaluation setup Completed and Exercises has be
6	BPC-HP-PLG-000026	BPC-HP-PLG-000026	Need to have Applicants against Request for Hire
7	BPC-HP-RFH-000002	BPC-HP-RFH-000002	Need to Identify Sources of Applicants
8	BPC-HP-RFH-000003	BPC-HP-RFH-000003	Need to setup the Evaluation Process and decide
9	BPC-HP-PLG-000026	BPC-HP-PLG-000026	Need to have Applicants against Request for Hire

Ready (Client = 1232 / Total = 2424) Local intranet

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Select From Blueprint	Select	No	Get Details - to fetch and modify existing process flow details
			Launch Flash Preview – to launch the flash preview of the process flow loaded

Load Flows – Task Level

How

To load the event flows at Task level enter/select the details below

Load Flows

Customer ID	ABC Inc.	Get BP	Customer Name	ABC Incorporation
Project ID	HRMS		Project Name	HRMS
Business Process ID	HP	Get Function	Business Process Name	Hire Process
Function ID	HRMShPRFH	Get Activity	Function Name	Request for Hiring
Activity Name	Request for Hire	Get UI	Activity Description	Request for Hire
UI ID	HPRFHRfhCMMCreReqC	Get Task	UI Name	Request for Hire
Task ID	HPRFHCrfhCFCrHR		Task Name	Fetchthe Request for Hire pag

[Load Process Flow](#)
 [Load Activity Flow](#)
 [Load UI Flow](#)
 [Load Task Flow](#)
 [Load BR Flow](#)

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Customer ID	Select	Yes	Load Task Flow – to launch the load task flow screen
Business Process ID	Select	Yes	
Function ID	Select	Yes	
Activity ID	Select	Yes	
UI ID	Select	Yes	
Task ID	Select	Yes	

Load Blueprint - Task Flow

Load Blueprint - Task Flow

Customer ID	ABC Inc.	Customer Name	ABC Incorporation
Project ID	HRMS	Project Name	HRMS
Business Process ID	HP	Business Process Name	Hire Process
Function ID	HRMSHPRFH	Function Name	Request for Hiring
Activity Name	Request for Hire	Activity Description	Request for Hire
UI ID	HPRFHRfhCMMCreReq	UI Name	Request for Hire
From Blueprint	<input type="checkbox"/> Yes	<input type="button" value="Get Details"/>	

#	Event Name	Event ID	Event Descr
1	TSK-HP-RFH-000012	TSK-HP-RFH-000012	request for hire has been s
2	TSK-HP-RFH-000001	TSK-HP-RFH-000001	Need to fetch the request
3	TSK-HP-RFH-000002	TSK-HP-RFH-000002	Need to load work location
4	TSK-HP-RFH-000009	TSK-HP-RFH-000009	Need to know competency
5	TSK-HP-RFH-000010	TSK-HP-RFH-000010	Need to know the recruiter
6	TSK-HP-RFH-000006	TSK-HP-RFH-000006	Need to know the departm
7	TSK-HP-RFH-000007	TSK-HP-RFH-000007	Need to know the job
8	TSK-HP-RFH-000007	TSK-HP-RFH-000007	Need to know the job
9	TSK-HP-RFH-000008	TSK-HP-RFH-000008	Need to know qualification

Ready (Client = 1673 / Total = 3015) Local Internet

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Select From Blueprint	Select	No	Get Details - to fetch and modify existing task flow details
			Launch Flash Preview – to launch the flash preview of the task flow loaded

Prepare Process Flow – Direct entry to Platform

How

To load the event flows at process level click on the “Prepare Process Flow” activity under the “Prepare Blue Print” component. Enter/select the details below:

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Prepare Process Flow

Customer ID	FINSRV	Get BP	Customer Name	FINSRV
Project ID	Loans		Project Name	Loans
Business Process ID	LOSOM	Get Function	Business Process Name	Loan Origination
Function ID	LOSDM	Get Details	Function Name	Manage Opportunities

Entry Event Details

#	Event Name	Event Description	Flow Type	Exec
1	BPC-LOS-SDM-000031	Loan Enquiry	External	Start
2			Information Exchange	Start
3			Information Exchange	Start
4			Information Exchange	Start
5			Information Exchange	Start

Exit Event Details

#	Event Name	Event Description	Flow Type
1	BPC-LOS-SDM-000012	Loan Request Rejected	External
2	BPC-LOS-SDM-000030	Deal Determined	Transfer of Control
3	BPC-LOS-SDM-000043	Due Diligence Request Created	Transfer of Control
4	BPC-LOS-SDM-000053	Application to be processed	Transfer of Control
5			Information Exchange

[Link to Activity flow](#)
 [Launch Flash Preview](#)
 [Save](#)
 [Associate Event](#)

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Customer ID	Select	Yes	Get Details - to fetch and modify existing process flow details
Business Process ID	Select	Yes	
Function ID	Select	Yes	
Entry Event Details Grid			
Event Name	System Generated		
Event Description	Enter	Yes	
Flow Type	Select	Yes	
Execution Sequence	Select	Yes	
From Business Process ID	Select/enter	Yes	
Exit Event Details Grid			
Event Name	System Generated		
Event Description	Enter	Yes	
Flow Type	Select	Yes	
Execution Type	Select	Yes	
To Business Process ID	Select/enter	Yes	

Prepare Activity Flow – Direct Entry to Platform

How

To load the event flows at activity click on the “Prepare Activity Flow” activity under the “Prepare Blue Print” component. Enter/select the details below

Powered by Ramco VirtualWorks™

Prepare Activity Flow

Customer ID	finsrv	<input type="button" value="Get BP"/>	Customer Name	FINSRV
Project ID	Loans		Project Name	Loans
Business Process ID	LOSOM	<input type="button" value="Get Function"/>	Business Process Name	Loan Origination
Function ID	LOSDM	<input type="button" value="Get Activity"/>	Function Name	Manage Opportunities
Activity Name	Manage Deals	<input type="button" value="Get Details"/>	Activity Description	Manage Deals

Entry Event Details

Event Name	Event Description	Flow Type	Execution Sequence	From Business Process ID	From Function ID
BPC-LOS-SDM-000031	Loan Enquiry	External	Start	External	External

Exit Event Details

Event Name	Event Description	Flow Type	Execution Sequence	To Business Process ID	To Function ID
ACT-LOS-SDM-0000	Request to be Created	Transfer of Control	Intermediate	LOSOM	LOSDM
ACT-LOS-SDM-0000	Contact to be Associated	Transfer of Control	Intermediate	LOSOM	LOSDM
ACT-LOS-SDM-0000	Activities to be Identified	Transfer of Control	Intermediate	LOSOM	LOSDM
ACT-LOS-SDM-0000	Borrower to be Associated	Transfer of Control	Intermediate	LOSOM	LOSDM
ACT-LOS-SDM-0000	Small Business Deal Determined	Transfer of Control	Intermediate	LOSOM	LOSDM

[Link to UI Flow](#)

 [Associate Event](#)

Controls* on UI	Action	Mandatory (Yes/No)	Tasks on UI
Customer ID	Select	Yes	Get Details - to fetch and modify existing process flow details
Business Process ID	Select	Yes	
Function ID	Select	Yes	
Activity Name	Select	Yes	
Entry Event Details Grid			
Event Name	System Generated		
Event Description	Enter	Yes	
Flow Type	Select	Yes	
Execution Sequence	Select	Yes	
From Business Process ID	Select/enter	Yes	
From Function ID	Select/enter	Yes	
Exit Event Details Grid			
Event Name	System Generated		
Event Description	Enter	Yes	
Flow Type	Select	Yes	
Execution Type	Select	Yes	
To Business Process ID	Select/enter	Yes	
To Function ID	Select/enter	Yes	

4.10 Glossary

Terminology	Explanation
Business Process	A value chain in an organization to realize a given business need. A business process consists of a set of business functions logically connected
Business Function	A business function can be defined as a set of activities performed to implement a business behavior of an organization unit
Activity	Activity is a subset of Function. Set of activities will form a Function.
UI	UI refers to the User Interface that's being launched when the user clicks on the Activity List available on the Menu part.
Task	Task is the specific action that's being performed as per user request
BR	BR's endow with the Functionality of the Application.
Event	An event is a stimulus that triggers a function. A function responds to this stimulus and results in an outcome
Event Sequence	Sequence of events depicted as start, intermediate and end events
Event Flow	Flow of events depicted as external, transfer of control and information exchange events
External Event	Events which enter/exit into the external world. External world also include external systems
Transfer of Control Event	Events, which hands over the 'control of information' from one business function to another business function in the process sequence
Information Exchange Event	Events, which facilitate transfer of information to and fro between two business functions
Start Event	Entry events, which trigger a business function
Intermediate Event	Internal events acting upon two functions for information exchange or transfer of control
End Event	Exit events to the external world or to another business process/function on completion of the required action

SYSTEM TESTING

5. SOFTWARE TESTING

Software Testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding.

The process of testing is done with the intent of finding an error in the system or an undiscovered bug in the system. Testing demonstrates that software functions appear to be working according to specification and that performance requirements appear to have been met.

5.1 Black Box Testing

Black-box testing, also called behavioral testing, focuses on the functional requirements of the software. Black-box testing enables to fully exercise all functional requirements for a program. Black-box testing attempts to find errors in the following categories:

1. Incorrect or missing functions
2. Interface errors
3. External Database errors
4. Performance Errors
5. Initialization and Termination Errors

Black Box testing focuses on the module in its entirety, as a “black-box”, with no interest shown as to how it has been developed. The intention here is to ‘break’ the system by testing it to possible conditions wherein the software throws up ‘errors’ in its execution. The type of testing chosen in black box testing was “Functional Testing” of the software. Here the test conditions / test cases are based on the functional requirements/ specifications of the application. Though White Box testing has been performed it does not guarantee to test all the functional requirements. Black Box testing is not an alternative but is likely to uncover different types of errors.

Graph-Based Testing

The first step in black-box testing is to understand the objects that are modeled in software and the relationships that connect these objects. Once this has been accomplished, the next step is to define a series of tests that verify, “All objects have the expected relationship to one another”. Here each object and relationship is exercised and errors are uncovered.

To accomplish these steps, the software engineer begins by creating a **Graph**-a collection of nodes that represent the relationship between objects; **links** that represent the relationships between objects

In Solutioning each Function/Activity/UI/Task is identified with separate Entry and Exit events that forms the root of the flow. Here the Function/Activity/UI/Task are identified as the Graph and Entry and Exit events are noted as links.

Each Function generates an Exit event, which forms the input for another Function. Request for Hire Function gets its Entry Event from External World. There can be more than one exit event generated by a Function.

Every Activity Flow finds its entry/exit events from Process Flow.

Every UI Flow finds its entry/exit events from Process/Activity Flows.

In Flash Previews Function/Activity/UI/Task are generated in red color hexagons and Entry and Exit Events are in Green color hexagons. External Entry Events and Exit Events at Process Flow level are marked with orange color hexagons.

5.2 Testing Strategy

➤ Verification and Validation

Verification refers to the set of activities that ensure that software correctly implements a specific function.

“Are we building the product rightly?”

Validation ensures that the software has been traceable to the Customer Requirements.

“Are we building the right product?”

Regression Testing: Refers to the selective re-testing of a system or component to verify that modifications have not caused unintended effects and the system component still conforms to the specified requirements.

CONCLUSION

6. CONCLUSION

“**Activity Flow Modeling - Hire Process**” has been successfully designed, deployed and tested. The flow generated is found to work effectively and efficiently.

The Flows of the Hire Process – Business Process Chain at various levels that has been generated by me will enable Ramco Systems to

- Communicate to prospective clients during presales
- Internal demonstration and training purpose
- Knowledge sharing
- Communicate to customer during implementation
- Share complete details of the software to partners without giving access to source code.

The system will undergo further enhancement to incorporate various components of different Business Process Chains of Human Resource Management Solutions to be depicted into flows at various levels.

SCOPE FOR FUTURE DEVELOPMENT

7. SCOPE FOR FUTURE DEVELOPMENT

The primary objective of this project is to depict the flow of Hire Process at various levels. Since majority of the work is being carried out manually like

- Entering the ID's from Frame Work Explorer
- Uploading Process, Function, Activity descriptions
- Mapping Flow Type and Execution Sequence to Events
- Identifying Entry and Exit Events for each activity
- Mapping Business Process and Functions to Events

To test the outcome and feasibility of getting a modeled view of a Business Process Chain at all levels is completed successfully and hence, tools will be developed in future to do the reverse engineering process at a rapid rate.

Customers will be demonstrated with the available Standard Components from component repository, which enables the customer to select/modify/add new screens and choose only those requirements that fit his enterprise needs. The most admired advantage of component architecture is that customization of enterprise application is easy without touching the existing system and deploying only those packages that are required for the enterprise. Scope for future development of the system is open and flexible for enhancement and development.

BIBLIOGRAPHY

8. REFERENCE

ROGER S. PRESSMAN “SOFTWARE ENGINEERING” MCGRAW-HILL
INTERNATIONAL EDITION

HP Auto Reference Manual (ARM) – Document Pertaining to Hire Process

Frame Work Explorer - Is the central repository, which is designed in tree format to give a detailed description of all the components at various levels.

WEBSITES

Application:

<http://system3/rvw/> (December 2003)

The above website serves as the central repository and authority for all the Components, Activities, User Interfaces and everything available under the Hire Process Business Process Chain.

Solutioning:

<http://budrack04/rvw/> (December 2003)

Modeling of Hire Process - Business Process Chain at various levels like

- Process Level
- Activity Level
- UI Level
- Task Level

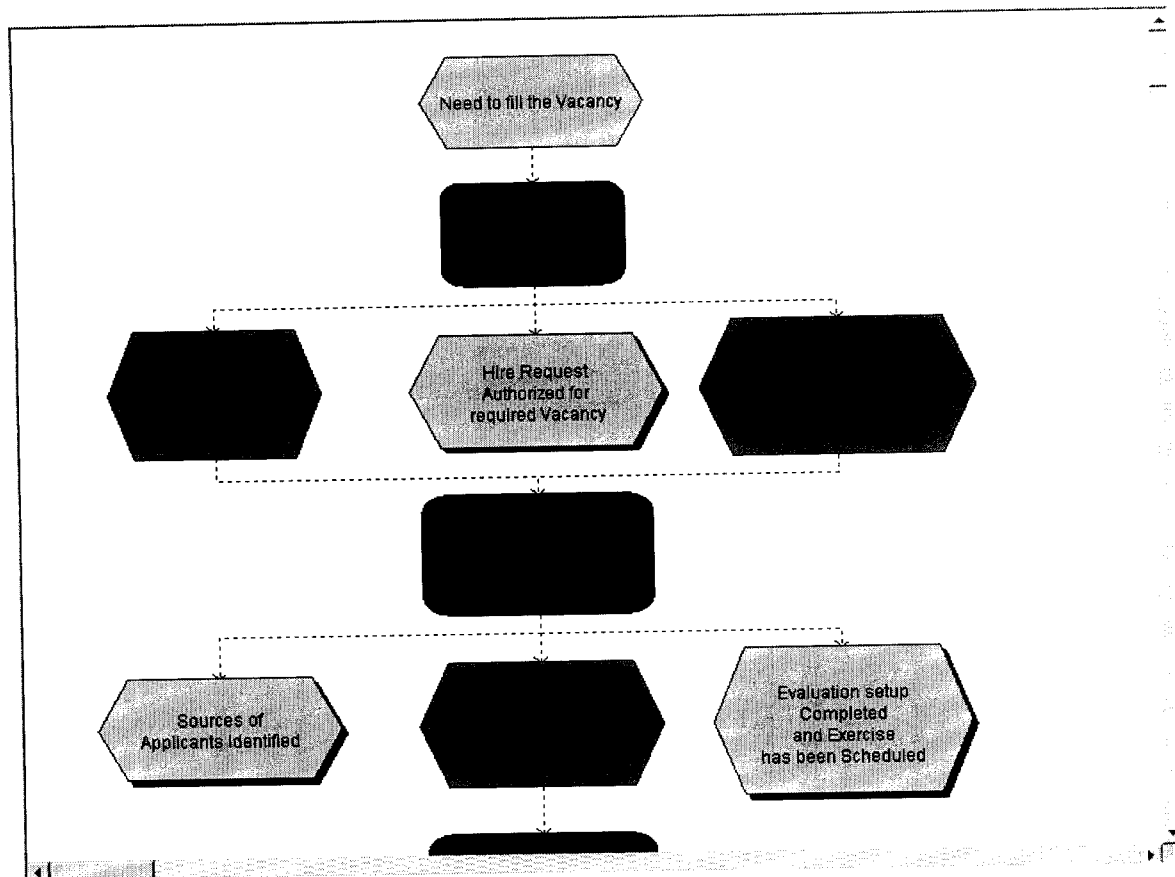
Is carried out at this website.

NOTE: The above given reference materials are available in Ramco Systems for internal use only.

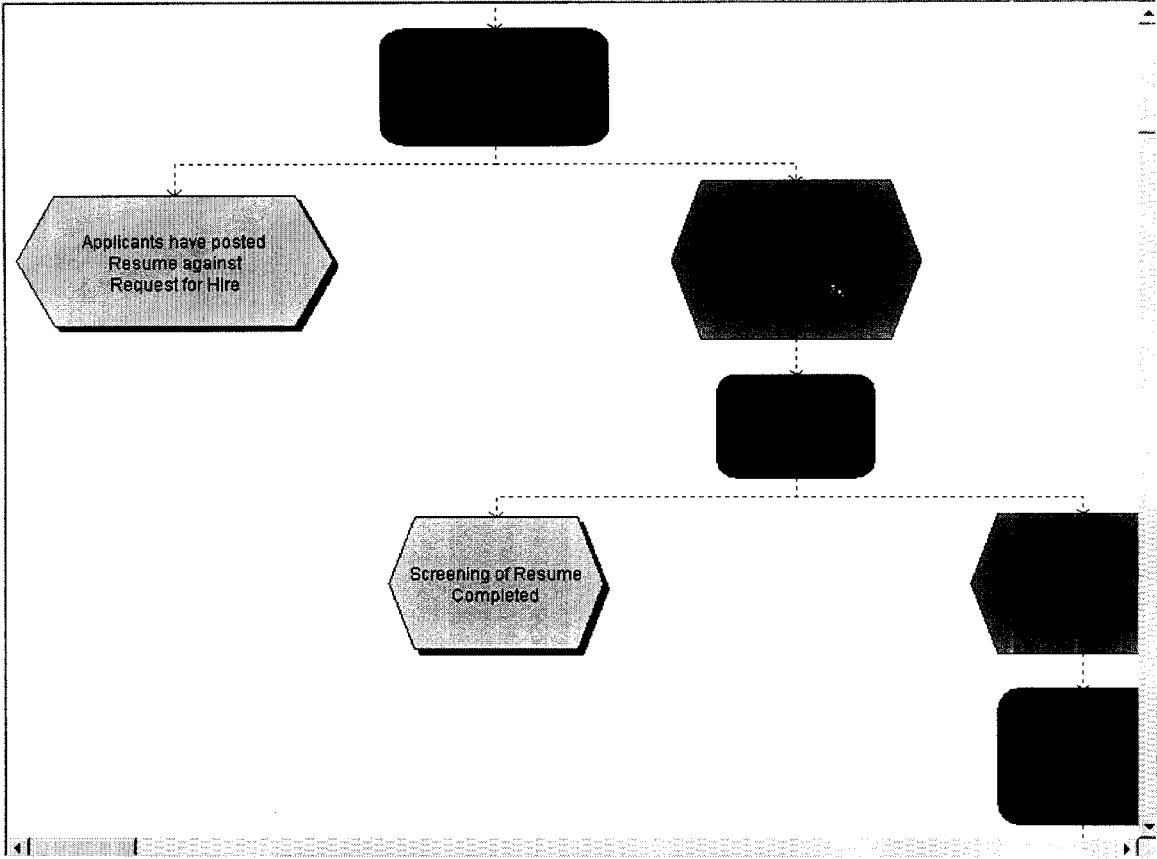
APPENDIX

9. SCREEN SHOTS

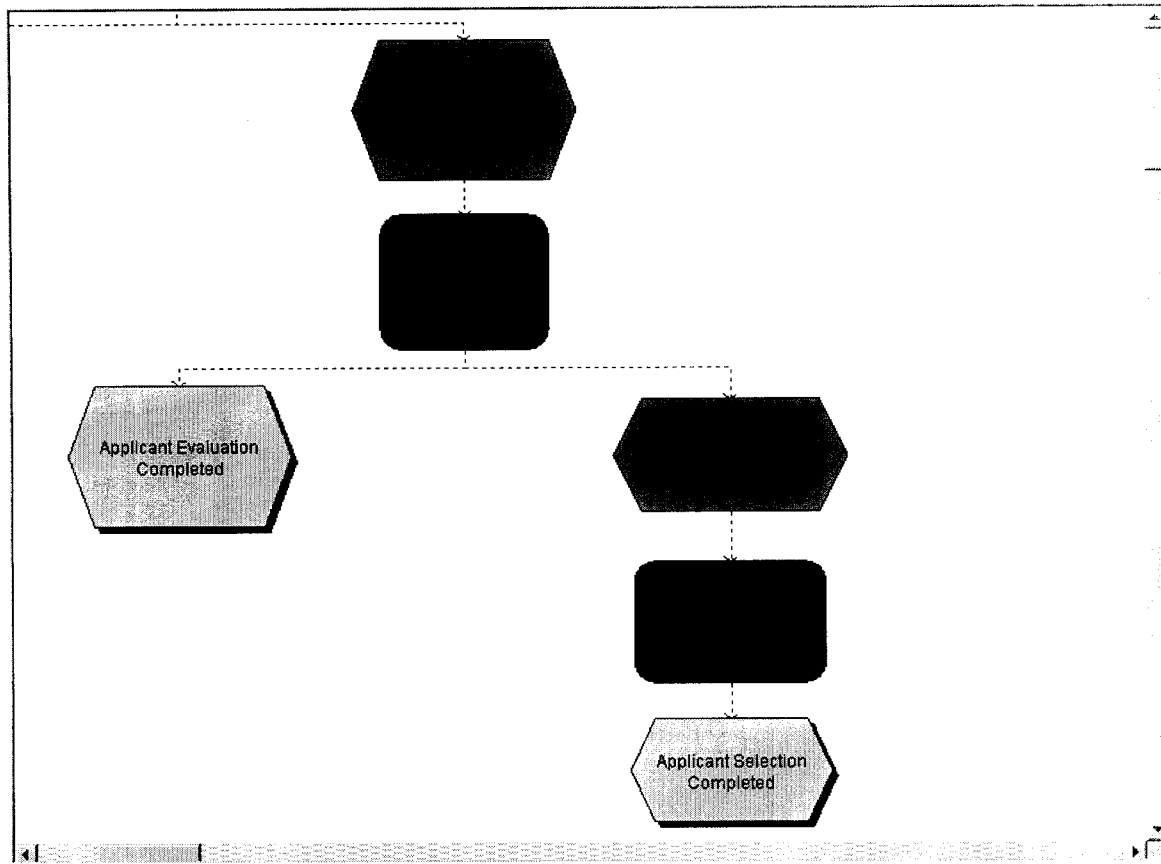
ARIS FLOW: Process Flow - I



Process Flow - II



Process Flow - III



FLASH PREVIEW

