

# IRCTC – Making rail reservations better

## Purpose

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This note contains a brief analysis of the current reservation process on IRCTC, the newly added quick book feature, and suggests ideas to make the customer experience even better.

## Foundation

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- [www.irctc.co.in](http://www.irctc.co.in) is the most successful e-commerce website in India. **More than 7050 reservations everyday**, and about 8500 trains included in the booking process.
- IRCTC (Indian Railway Catering and Tourism Corporation Ltd., set by the Ministry of Railways in 1999) has played a huge role in **transforming customer experience** for buying a railway ticket. The lengthy queues for booking tickets or black marketing of tickets is no more the default way of buying tickets.
- IRCTC has also introduced many **innovations** including e-ticket and mobile booking.
- The website is a **bad experience for the user**. Many operations are slow, error prone and difficult to understand. If one step goes wrong, you have to do the whole process again.
- It has taken us any time between **15 minutes to 6 hours to book a ticket** successfully. Many **others share similar** experience.
- The new Quick Book feature addresses many of the concerns.
- Yet, the process **can be significantly improved** – resulting not only in much higher customer satisfaction, but also much lower transaction times, and consequently, less load and bandwidth consumption for the server.

**Can we make India's most successful e-commerce site, also a delight to use?  
That's the question we started this report with!**

# Problems in Existing Website



## Home Page

- Primary purposes of website - “Reservation” and “Train Inquiry” are not visible
- It's difficult to find the starting point – especially for a novice user
- Lots of advertisements on the home page
- Lot of blinking / animated portions distract the user
- Icons and featured text are not at proper places
- The login portion itself has too many options
- Layout doesn't look professional

## User Registration Page

- Form does not fit into a single window, ideally it should
- User name and password are asked at end, they should be at the beginning
- Shipping address is not necessary on this page
- Designation contains only 25 characters, should be 50 characters
- Value Added Services are on the same page here, which can be avoided
- The user has to login again after registration, this should be avoided
- Sometimes, even after registration, logging in results in a message that the user is not registered

## Plan My Travel Page

- Icons aren't clear as to their purpose - Train Icons for From and To
- Selection date is today by default, but i-ticket (default option) requires minimum 3 days in future
- It is difficult to understand the three different types of tickets, there is help icon, but it opens in a popup window.
- The list of trains after submission, comes below the fold. It's difficult to understand that something happened after the submission
- There are many pop-ups – availability, route, fare etc. This should be avoided
- Ideally, an option to book the return ticket too should be provided. The request can be saved and used later, if the booking for that date has not yet started.
- There are also advertisements and other links on the Play My Travel page, they distract the user from the main task.
- Checking availability is a crucial part of the booking process, but the user has to click a button and see a popup window for this.
- Many a times, this even comes up with an “Unable to retrieve due to communication failure” problem!

**Plan My Travel and Book Ticket** \* Mandatory

From \*

To \*

Date \* 29 Dec 2006

Class \* Select Class

Ticket Type \*  i-ticket  e-ticket  Tatkal

**Go** **Reset**

Now Get Back  
Upto **10%\*** of your AC ticket fare  
As Railway Points with **Shubh Yatra**

**Apply Now** **Know More**

To get Shubh Yatra benefits on this ticket About Shubh Yatra

\*Terms & Conditions Apply

Tatkal **Go** **Reset**

Now Get Back  
Upto **10%\*** of your AC ticket fare  
As Railway Points with **Shubh Yatra**

**Apply Now** **Know More**

To get Shubh Yatra benefits on this ticket About Shubh Yatra

\*Terms & Conditions Apply

Your ticket will be booked only if availability status is Confirmed/ RAC. If availability status is W/L the booking will be aborted and you will be redirected to this page for booking a normal i ticket in the waitlist if you so desire.

**List of Trains** Please Select The Train From The List

S#	Select	Train No	Train Name	Departure	Arrival	Runs on
1	<input type="radio"/>	1007	DECCAN EXPRESS	07:10	11:10	M T W TH F S SU
2	<input type="radio"/>	1009	SINHAGAD EXP	14:30	18:40	M T W TH F S SU
3	<input type="radio"/>	1021	INDRAYANI EXP	05:40	09:08	M T W TH F S SU
4	<input type="radio"/>	1029	KOYNA EXPRESS	09:00	13:05	M T W TH F S SU
5	<input type="radio"/>	2123	DECCAN QUEEN	17:10	20:25	M T W TH F S SU
6	<input type="radio"/>	2125	PRAGATI EXPRESS	16:25	19:53	M T W TH F S SU
7	<input type="radio"/>	2127	INTERCITY EXP	06:45	09:52	M T W TH F S SU

**Book Ticket** **Get Fare** **Show Route** **Show Availability**



http://www.irctc.co.in - IRCTC :: - Availability

इण्डियन रेलवे कॅटरिंग एण्ड टूरिज़म कार्पोरेशन लिमिटेड  
[भारत सरकार का उद्यम]

12/29/2006 03:11:05 PM

**Accommodation Availability**

Train No	Train Name	Date	Source Station	Destination Station	Class
2127	INTERCITY EXP	04- Jan- 2007	CSTM	PUNE	2S

**Status Report**

Serial No	Date	Status
1	4- Jan- 2007	AVAILABLE- 0207
2	5- Jan- 2007	AVAILABLE- 0243
3	6- Jan- 2007	AVAILABLE- 0247
4	7- Jan- 2007	AVAILABLE- 0194
5	8- Jan- 2007	AVAILABLE- 0260
6	9- Jan- 2007	AVAILABLE- 0285

Done **AdBlock**

## Payment Options

- There are too many payment options, and difficult to understand which one is better. This also comes up in a pop-up window. Ideally, this can be a preference that can be set in the user profile.
- Many a times, the booking process fails on payment, despite a note that you can see this in the failed payments page, it does not show up

**Payment by Credit Cards :**

**ICICI Bank Payment gateway** [Help?](#)  
For all MASTER / VISA Cards /HDFC Debit Cards.Transaction Charges

**CITI Bank Payment gateway**(Operated by Citibank) [Help?](#)  
For all MASTER / VISA/ DINERS CLUB CREDIT CARDS.Transaction Cha

**American Express Bank Gateway** [Help?](#)  
For all credit cards issued by American Express.Transaction Charges

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**Payment by Credit Cards EMI Option :**

**CITI Bank EMI gateway** [Help?](#)  
Pay in 3 installments with your Citibank/Diners Club Credit Cards.Tran

**ICICI Bank EMI gateway** [Help?](#)  
Pay in 3 installments with your ICICI Bank Credit Cards. Transaction c

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**Payment by Direct Debit facility :**

Select your bank for making payment. On completion of payment proced automatically proceed with the booking confirmation.

**ICICI Bank** (Transaction Charges of Rs. 10/-+Service Tax as applic

**HDFC Bank** (Transaction Charges of 1.8% ) [Help?](#)

**Citibank** (Transaction Charge Rs 10) [Help?](#)

## Quick Book Process

Most of the usability problems are taken care of in the new Quick Book feature IRCTC introduced. Yet, the Quick Book feature is for “experts” - as you need to know the train number and need to be sure of the availability before you book the ticket. This defies the purpose for people who are new.

The form design too does not render well across browsers.

Quick Book

From\*  To\*

Date\*

Class\*

Train No.\*  Bda. Pt.\*

Ticket Type\*  e-Ticket  i-Ticket

Quota\*  General  Ladies Tatkal

[Show Availability](#)

Passenger Details					
SNo	Name	Age	Sex	Berth Preference	Senior Citizen
1	<input type="text"/>	<input type="text"/>	<input type="text" value="Select"/>	<input type="text" value="Choose Berth"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="text" value="Select"/>	<input type="text" value="Choose Berth"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="text" value="Select"/>	<input type="text" value="Choose Berth"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="text" value="Select"/>	<input type="text" value="Choose Berth"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="text" value="Select"/>	<input type="text" value="Choose Berth"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="text" value="Select"/>	<input type="text" value="Choose Berth"/>	<input type="checkbox"/>

**Consider for Auto Upgradation.**

Photo Identity card holder\*

ID Card Type\*

ID Card No\*

Issuing Authority\*

Payment Options

**Service Charges**

[Reset](#) [Quick Book](#)

# A Better Approach

We suggest a fine tuned approach to doing train reservations via IRCTC. Focused on the thing people come to the website for – to check availability of, and book tickets. Some of the points in this approach:

- Single screen, rich internet application.
- Reservation process on the home page of IRCTC
- Login not required for checking availability, only for booking, and can be done after booking
- Station code lookup while the user types the name
- Train availability – select multiple trains, and click once to get availability in all
- Single date field, automatic format conversion
- In line contextual help available
- Visual effects to show the progress of the process
- Single spot for advertisement – can rotate
- Can change any parameter at any time, and the remaining will update automatically – e.g. Change in date, will automatically check availability for selected train
- Payment options – one chosen by default, others available on request

The screenshot displays a three-panel reservation interface. The first panel, 'MAKE A PLAN', contains input fields for 'From' (Mumbai), 'To' (Delhi), 'Date' (1/1/2007), 'Class' (First Class AC(1A)), and 'Ticket Type' (I-Ticket), with a 'Search Train' button. The second panel, 'SELECT A TRAIN', shows a table with columns 'Train', 'Arr', and 'Dep'. It lists 'Shatabdi Express' and '209U Intercity Express', both with arrival and departure times of 12:00 and 12:15, and availability of 37WL and 205 respectively, with a fare of 1250. A 'Yes, Select Train' button is at the bottom. The third panel, 'TRAVELLER'S INFORMATION', has columns for 'Name', 'Age', 'Sex', and 'Berth'. The first row is filled with 'Nirav Mehta', '27', 'Male', and 'Lower'. Below are five empty rows, each with 'Male' and 'Lower' dropdowns. A 'Save' button is at the bottom.

Train	Arr	Dep
Shatabdi Express	12:00	12:15
Avail:37WL Fare:1250		
209U Intercity Express	12:00	12:15
Avail:205 Fare:1250		

Name	Age	Sex	Berth
Nirav Mehta	27	Male	Lower
		Male	Lower
		Male	Lower
		Male	Lower
		Male	Lower
		Male	Lower

REVIEW THE PLAN	MAKE PAYMENT	CONFIRMATION
<p>2 Jan 2007 Tuesday <b>209U Intercity Express</b></p> <p>Dadar-6.45 a.m. Pune-9.0 a.m.</p> <p><b>Available 205</b></p> <p>1 Passanger Nirav Mehta, 27, Male</p> <p><input type="button" value="OK"/></p>	<p>Payment Method <b>Gateway 2(Oper</b> ▼</p> <p>Card Type <input checked="" type="radio"/> Master <input type="radio"/> Visa</p> <p>Name On Card <input type="text"/></p> <p>Card Number <input type="text"/></p> <p>Expiry <b>Jan</b> ▼ <b>2007</b> ▼</p> <p>CVV Number <input type="text"/></p> <p><input type="button" value="Pay"/></p>	<p><b>Congratulations!</b></p> <p>Your ticket has been booked.</p> <p>2 Jan 2007 209U Intercity Express S7-46</p> <p><input type="button" value="Print"/></p> <p><b>Book:</b> <a href="#">Return Ticket</a> <a href="#">Another Ticket</a></p>

## Prototype

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We have built a simple prototype to illustrate the above points. A lot more needs to and can be done on this prototype, but it can give you an idea of how things can be developed.

<http://www.mehtanirav.com/makebetter/irctc/>

Note that this is a simple prototype. Some transitions and data are inconsistent. We quickly put this together to demonstrate what is possible.

# Advantages

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- Reservation on the first page makes it **easy to a novice** to get the job done
- Single screen design makes it **clear** to the customer on what to expect
- **No page reloads** – easy for the user, more efficient for the server
- Send **only the data** that is needed, display is taken care of by the interface. E.g. Server sends only the train number, name, arrival / departure time and availability data on an inquiry – not the whole HTML code
- **Faster response time** – since client has to send and receive less data, and the server too is freed to do the core business logic, rather than the presentation part
- Ability to change one item and **automatic update** on others – this will make it easier for users to book their tickets – significantly reducing the transaction time
- We can anticipate a **huge increase in customer satisfaction** with this new process – it's simpler, faster and flexible
- The back-end and front-end are separated, **front-end is intelligent** – can cache data, process it etc.
- Advertisements can still be delivered, you can even deliver contextual ads as the user plans their travel. Other pages of the site can also be integrated.

Note that what we are showing is just a prototype. Many improvements are not present in it.

## About Magnet

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Magnet Technologies Pvt. Ltd. is a high end technology solutions company. We deliver simple solutions to complex problems for our global customers. We have won various awards and recognition for our work over the past 8 years – including RedHerring Hot 20 Companies Championing Open Source.

Our areas of expertise are Web Solutions, Rich Internet Applications, Linux Solutions and Mobile Applications.

## Contact Details

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