Designing an Integrated Map for a Visionary Public Transport System in Dublin

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Case Study

Getting from O'Connell Street to Argos Car Rental

A realistic problem scenario was set up to explore possible pitfalls and shortcomings of public transport in Dublin – many of which had been indicated in responses of the survey. This case study intended to generate a step-by-step analysis of frequent problems. The scenario was a single individual wishing to travel from a central location (to be fair) to a realistic destination, such as Argos Car Rental in Dublin South
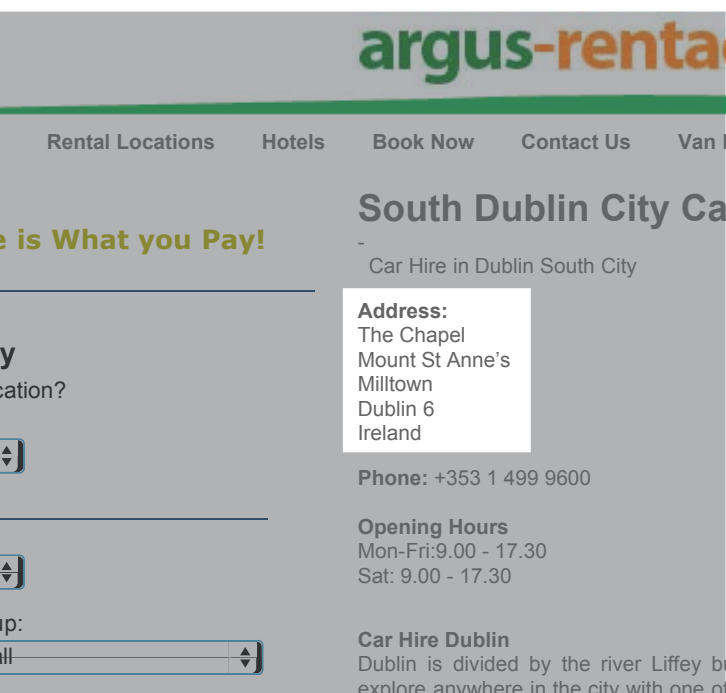
CS.01 – Argus Car Rental website – address

CS.02 – Case Study – Journey origin: O'Connell St.

CS.01 – A standard starting point often is an address. In this example test subject A. wishes to reach a car rental company in South Dublin city. Very few businesses would give detailed descriptions of how to get to them, particularly by public transport. The most common extent of website directions is an embedded googlemaps window (often not even that). At the time of this case study, there were not even any public transport tags in Dublins GoogleMap. Where many other cities have developed a culture of using public transport stops and hubs as landmarks and orientation points, in Dublin the most likely landmark to be referred will often be the nearest pub.

CS.02 – Armed with his printed out website and simulating a visitor or non-native, test subject A. starts his journey on a central connection point – O'Connell Street. Maybe he knows Dublin Bus Head Office is located here and he wishes to get information there.

Not all journeys have a start as favourable as O'Connell Street. Travelling from a decentral location to another can be incredible complex, but that was avoided in this example.

CS.03 – The only map in all the information stands at Dublin Bus Head Office (time of case study: Jan. 2009) is the common Dublin Visitor Map (by the Dublin City Business Association - see map in CS. 03). This map is of no help. It only shows a small area of Dublin (the city centre from the Grand Canal in the South and Dorset Street in the North). The is no greater Dublin area refernce. There is no way for test subject A. to know this. He is searching for "Terenure Road East", "Rathgar" or "Argus Car Rantal". Even if the destination were included on this map, the only bus rendered on the map is

CS.03– Standard Issue: Dublin Visitor Map
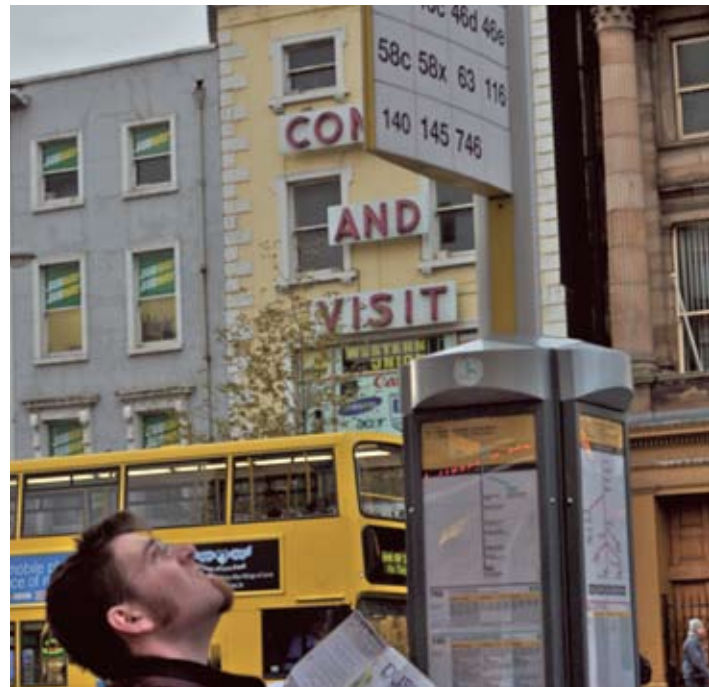

CS.04 – Trying to identify route by destination

the "Dublin City Hop on Hop off" tour. Ironically, both LUAS lines and the DART line is included.

CS.04 – There is a confusingly large number of stops along both sides of O'Connell Street. There are no maps that would show the bus network, no information terminals. In fact, there is not a single bus shelter on this street. Even bus shelters would not offer sufficient information to help test subject A. They currently display a small map that list the districts and buses that go there. The city centre is not included in this rendering and there is no way of knowing where to pick up any bus.

CS.05 –   The only way to resolve any questions about destinations is to ask bus drivers. Questions that bus drivers frequently encounter range from reassurance that it is the correct bus to what bus to take to reach destination X. Frequently, there is a long queue waiting to board the bus and approaching the driver for a question can be daunting. A lot of the fares payment is still handled by the driver and he also seems to be responsible for checking every boarding person's ticket (including the people using prepaid tickets or smart cards). Furthermore there is constant pressure of keeping the bus in its scheduled time. Therefore, drivers can be extremely busy and short in time. While many respondants to the survey mentioned extremely unfriendly and brisk drivers, the author's personal experience generally finds bus drivers to be surprisingly helpful and friendly,

CS.05 – Asking bus driver for directions
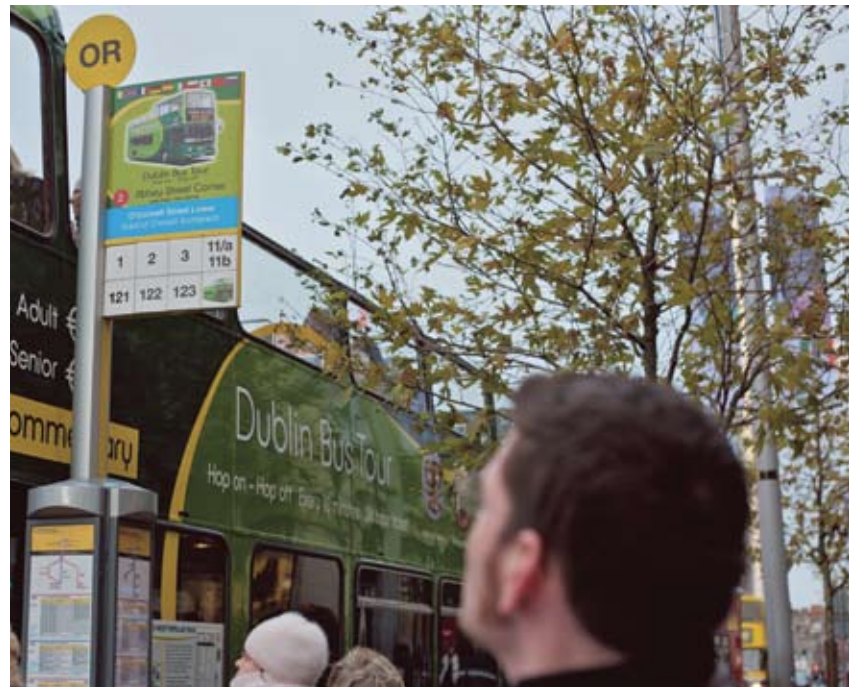
CS.06 – Looking for bus stop for route 15A

particularly in light of the pressure they are under. Naturally, there are exceptions. In this case study, subject A. is informed by a bus driver that Ternure Road East would be served by the route 15A, "down the road" is the direction.

CS.06 –   Walking down O'Connell Street there is an overwhelming number of bus poles (16 bus stops – 8 on each side). Each stop is called O'Connell Street. There are yellow markers with a two letter code on top of the poles. At the time of this case study, no key was readily available. Since Feb. 2010 a new map (Dublin Bus Network 2010) offers an index that lists the buses per unique letter combination. Curiously, this map is only available at the Dublin Bus Head Office and even to date, the map that is on general display there (May 2010) still is the above mentioned "Dublin Visitor Map". The much more helpful "Dublin Bus Network 2010" map is handed out upon request, therefore only at

the information counter. The bus poles also feature a list of the route numbers that are scheduled to stop there. Subject A. is walking down O'Connell Street in the direction pointed out by the bus driver, scanning each bus pole for route number 15A.

CS.07 –   After passing 6 bus poles with no 15 A in sight, subject A resorts to asking pedestrians. With the vast amount of bus routes in Dublin (well over 150) even proficient bus users would typically only know bus routes they use themselves. Even many Dublin natives are overwhelmed by the bus network (see survey results). Eventually, a passerby tells subject A that the 15A bus starts from across the river, at Trinity College

CS.07 – Locating stop for route 15A
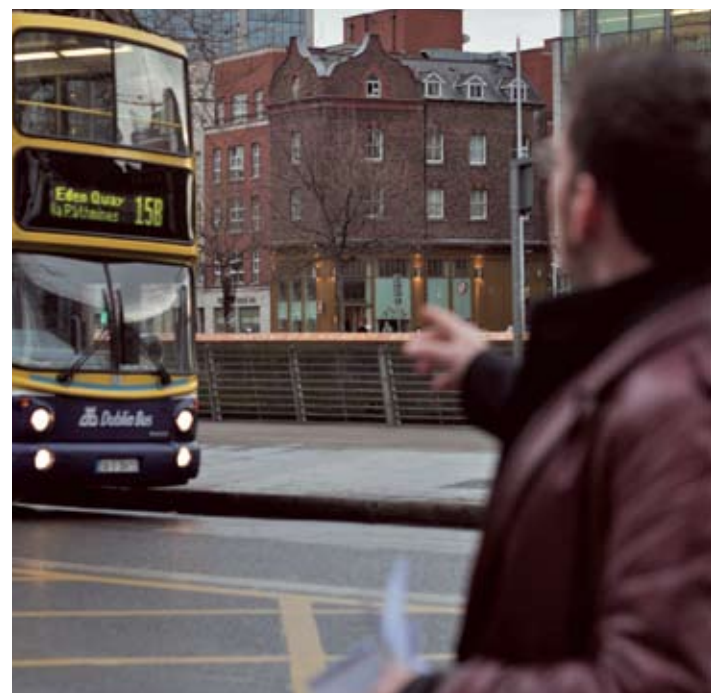
CS.08 – Problems with route naming system

CS.08 –   Along the way, subject A encounters a parking bus with the route number 15B. If instructed to look for a 15A it is natural to suspect that the 15B might run on a similar alignment, yet, the different letter can in many cases mean that the bus reaches the same destination on a different route or that it diverts of the desired route before reaching the desired destination. The parking 15B has its lights on at the upper deck only, the doors are closed and nobody is inside. There is a sign saying "set down only", no time tables. And since there is no evidence of any 15A the search continues.

CS.09 –   Subject A crosses the river, still following the direction pointed out by the bus driver and more specifically, the pedestrian. He now enters the D'Olier Street/Westmoreland Street fork, where northbound and southbound buses run on entirely different streets. Still screening the bus poles for the number 15A, he finds bus pole CK. It fea-

tures bus routes 14, 14A, 16 and 16A. But where is the 15A? The numbering system can not be expected to run in sequence everywhere, but when walking down past the bus stops in the city it does not seem to follow any recognisable pattern. Sequences may be torn apart, but sometimes, run alongside (120, 121, 122).

CS.10 –   Eventually, subject A finds the right stop (next to Trinity College). The timetable does not list the full list of stops for every route, even when bus travellers may often be instructed to get off the bus at a specific stop. The route 15A indicates a time 4 minutes later. Oblivious to subject A, the listed times do not relate to this stop, but the origin of this route. There is no indication on the timetable that this is the case. Unbeknownst

CS.09 – Where is 15A?

CS.10 – Timetables

to subject A the 15A bus starts one stop prior to Trinity College, but this discrepancy can – in other locations – be devastating. Apart from buses often running in very irregular frequencies (contradicting frequencies indicated by timetables), the fact that timetables relate to the origin and not the current stop cause people to generally have little faith in the timetables. Even if the customer knew that the indicated times relate to the origin, many customers, particularly foreigners and tourists, would have no sense of where these places are, how far they are and how long a bus could possibly take to reach the current location.

CS.11 –   People ahead of subject A all name a fare to the driver. The bus system does not work by identifying destinations (very confusing to non-natives). There are very few vending machines at bus stops (even central ones) that would help identify the right fare

and avoid long queues. The author is only aware of vending machines at Dublin Airport. Currently, the bus stops and stages do not all have unique names (there are 5 Cork Street stops, 9 South Circular Road Stops etc.). They rarely are named by landmarks in the area or local side streets but more generally the street they run on (often very long).

CS.12 – The bus driver does not know Argus Car Rental, but fortunately Terenure Road East and names a fare. To date, a large percentage of payment is still handled in cash. The out-of-date autopay system does not give any change. Fares have to be paid in exact amounts. Notes are not accepted – a potentially very big problem, as failing to have enough coins leads to having no other option but to leave the bus.

CS.11 – Naming a fare upon entry

CS.12 – No bank notes accepted

CS.13 – Fortunately, another customer agrees to change the 5-Euro note into coins. For the overpaid amount instead of cash a printed refund ticket is printed, not redeemable in buses. The one place that issues refunds in Dublin is the Dublin Bus Head Office. As a result, may refunds remain unclaimed. Accidental overpayment results in the same.

CS.14 – Subject A is now inside the bus and has no remote idea of how long the journey will take and when to get off the bus. He searches in vain for a simple timeline that lists all stops in sequence. After 10 Minutes travel he gets increasingly nervous.

CS.15 – Surprisingly, stops are not announced (neither by display nor audio – a display in the upper deck only displays "Stopping"). The station names on bus shelters and poles are printed so small, that they can not be identified from inside an approaching bus.

CS.16 –   Ignoring the sign "Do not to talk to the conductor during driving", subject A asks for orientation. The driver promises to inform subject A, when to get off the bus. At this point, he has to trust that the driver remembers to do so. Subject A can not lean back, enjoy the drive, read or listen to music but is in constant alert for a notice by the driver.

CS.17 –   Fortunately, the driver remembers to inform subject A. to get off the bus. If he had not (which happens occasionally, not always by the driver's fault but say, when drivers get exchanged during the journey), subject A could be in for a big tour.

CS.13 – Problems around AutoPay system

CS.14 – Lack of in-vehicle information

CS.18 –   The small stops and stages in the outlying areas tend to heva even less information than the ones in the city centre. There still stops without are carrousels or where these do not feature any timetables. Of course, subject A. is still oblivious to the times in these timetables not relating to the local stop but to the origin of this route. Luckily, subject A. finds Argus Car Rental quickly and ends his public transport experience.

This case study was carried out in Jan. 2009 in a realistic scenario that illustrates the shortcomings of using Dublin Bus for travelling. This experience can be extremely stressful and confusing for anybody new to the system.

CS.15 – No display/audio announcements of stops
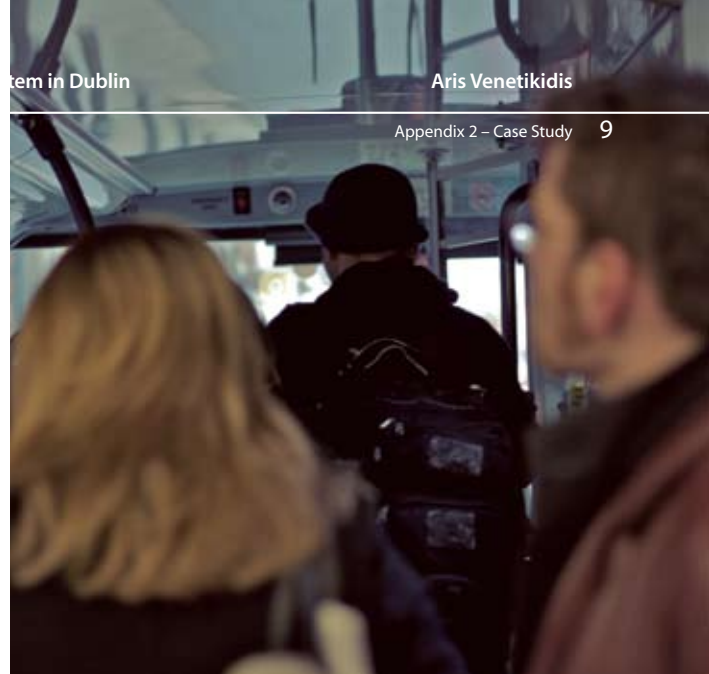
CS.16 – Resorting to help from bus driver

CS.17 – Getting notice, where to get off the bus

CS.18 – Poor information in outlying areas

Problem Areas:
and their interrelation

Bus Stop Names

bus stage names are not announced

People don't know bus stage names

complicated upon entry: naming destination

no list of stage names inside buses or at stops

passenger does not know when to get off

Payment and Ticketing

coin-based "Autofare" (no change given)

flimsy ticket/little info

refund can only be claimed at one location (limited opening hours)

standard fare: can't change bus/transport

need for integrated ticket (Metro, LUAS, DART, Bus)

fare by number of stops: incomprehensible

Integrated Route Map

lack of a route map that displays the names of bus stages

Lack of a comprehensive Route Map

Options for connections are not communicated

Effects:

People pay the wrong fare (i.e. too much)

Disorientation

Interrelations of problems around Dublin Bus travel, six problem areas and four common effects

Bus Shelters/Bus Stops

names on stops too small

often names on Stops do not relate to landmarks

central key stops are very complex (panned out stopping points)

no means of knowing arrival time or distance to next connection

Time Tables

complicated lists without colour coding and badly laid out

times displayed relate to bus departure at origin

Routes

confusing rute numbers: 15, 15A, 15X etc.

route number close to each other need not have destinations close to one another

star-based routing (most bus routes squeeze through the city centre)

need for circular (orbital) routes

Long waiting time, not knowing time 'til connection

Conjested City Centre