

m-Companion

Walking instructions up to the front door... and beyond!

Highly-specific user- and location- dependent information.

m-Companion is an interactive service designed to assist people move around and discover public areas. It provides walking or driving directions as well as user- and location-dependent information. For example: train or airline departure times, restaurant menus, shop promotions, hotel room availability, and tourist information.

Light and affordable user equipment

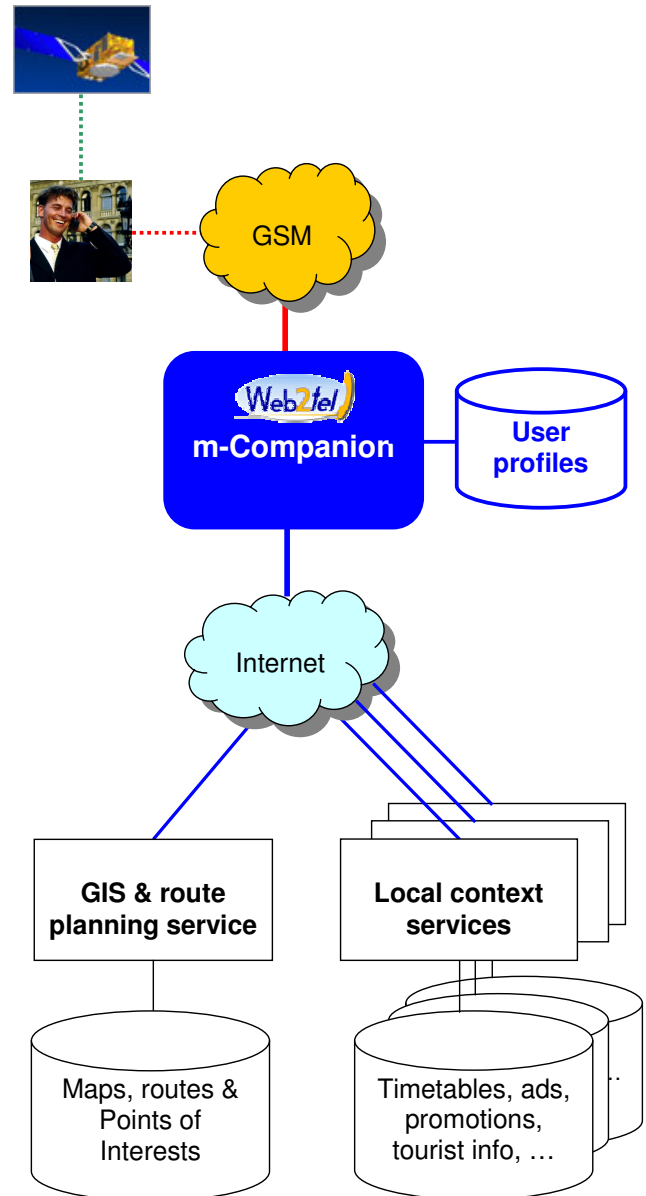
- ✓ In its simplest form, users just need their mobile handset. A basic handset model is appropriate, because m-Companion is a speech-based system.
- ✓ A satellite receiver may be added for automatic positioning.
- ✓ Neither map, nor database or software license is needed on the handset.

Highly specific user instructions

- ✓ Information is selected to match to the user preferences: business, leisure, shopping, ...
- ✓ Instructions can be extremely fine-grained, for example depending on which floor and which corridor they are inside a multi-storey building.

Sample applications

- ✓ Walking instructions in dense urban areas, or inside buildings.
- ✓ User-specific walking instructions and targeted advertisement inside a mall or other shopping area.
- ✓ User-specific walking instructions and personalized guidance inside airports, train stations or other complex transportation systems.
- ✓ Driving instructions. m-Companion is substantially cheaper than existing automotive navigation systems.
- ✓ Driving and walking instructions inside a car park.
- ✓ Walking instructions and personalized information for the visually challenged.



Web2tel builds on Web standards, to design next generation Interactive Voice Response (IVR) services.

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The mobile electronic companion

Have you ever been lost in town, desperately looking for your customer's building, and nobody at hand to tell you which way to go? Have you ever been walking in a foreign country, without a city map or guide, unable to ask for directions in the local language? Have you ever been looking for a friend's cottage, wondering why you didn't purchase that smart navigation system with your brand new car? If this sounds familiar, there may be a solution coming. **Web2tel, a young company from Sophia-Antipolis**, located in the French Telecom Valley, is developing an innovative product specially intended to help you.

m-Companion is an interactive service designed to help people move within and discover public areas. It provides walking or driving directions as well as user- and location-dependent information. For example: train or airline departure times, restaurant menus, shop promotions, hotel room availability, or tourist information.

The core of m-Companion is an Interactive Voice Response (IVR) service coupled with a Geographical Information System (GIS). Pick up your cell phone, call m-Companion and ask for directions. The IVR includes state of the art Automatic Speech Recognition (ASR) technology and a database off all known streets, roads, places, parks, corners, and other location names. You say where you are and where you want to go. m-Companion then calculates the best itinerary and tells you the walking instructions using best in class Text-To-Speech (TTS).

Don't even know where you are? All right, you need an extra device: a satellite positioning receiver. Connect it to your cell phone, and m-Companion will use the satellite data to locate you. The complete solution is comparable to an automotive navigation system, and substantially cheaper.

As of today, you can purchase a Global Positioning System (GPS) receiver from your local electronics dealer. GPS works perfectly outdoors. It still has some limitations some parts of the globe, such as Northern Europe, dense urban areas, and inside buildings. These limitations will be overcome when Galileo, the European satellite positioning system, is launched. This will open a whole range of new applications, such as traveler guides inside airports, train stations, and museums, or buyer guides inside shopping areas and malls.

Don't even know where you are going? All right, maybe you should try the visitor's guide section of m-Companion...



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Example: Walking instructions in Munich

Jack comes to Munich by train for a customer meeting. He is standing in front of the railway station, wondering how to reach the meeting place. The customer told him that Karolinenplatz is within walking distance of the railway station, but where?

Jack notices the m-Companion phone number, conveniently displayed nearby the exit of the railway station. He picks up his cell phone, dials the number and the dialog starts as follows:

m-Companion: **Welcome to Munich. Where would you like to go?**

Jack: **mm, I want to go to, er, to Karolinenplatz, please.**

At this point, m-Companion's Automatic Speech Recognition (ASR) system scans Jack's query, detects the only significant word and asks for a confirmation:

m-Companion: **If you want to go Karolinenplatz, press 1. Otherwise press star.**

Jack presses 1 to confirm. m-Companion now needs his starting point. Since he does not have a satellite positioning receiver (yet), the dialog continues:

m-Companion: **Where are you at present?**

Jack: **Well, I'm in front of the railway station.**

Again, m-Companion's ASR scans Jack's query, detects the significant word and reformulates the starting point:

m-Companion: **If you are on Bahnhofplatz, press 1. Otherwise press star.**

Jack presses 1 to confirm. m-Companion calculates the shortest route and the dialog goes on:

m-Companion: **The walking distance is 1050 meters. Go ahead on Bahnhofplatz and walk for 190 metres until Luisenstrasse. When you reach Luisenstrasse, press 1. To repeat the instructions, press 2. For a new route, press star.**

Jack walks to Luisenstrasse and presses 1.

m-Companion: **Go ahead on Luisenstrasse and walk for 60 metres until Sophienstrasse. When you reach Sophienstrasse, press 1. To repeat the instructions, press 2. For a new route, press star.**

Jack walks to Sophienstrasse and presses 1.

m-Companion: **Turn right on Sophienstrasse and walk for 310 metres until Arcostrasse. When you reach Arcostrasse...**

and the process goes on until Jack reaches his destination.

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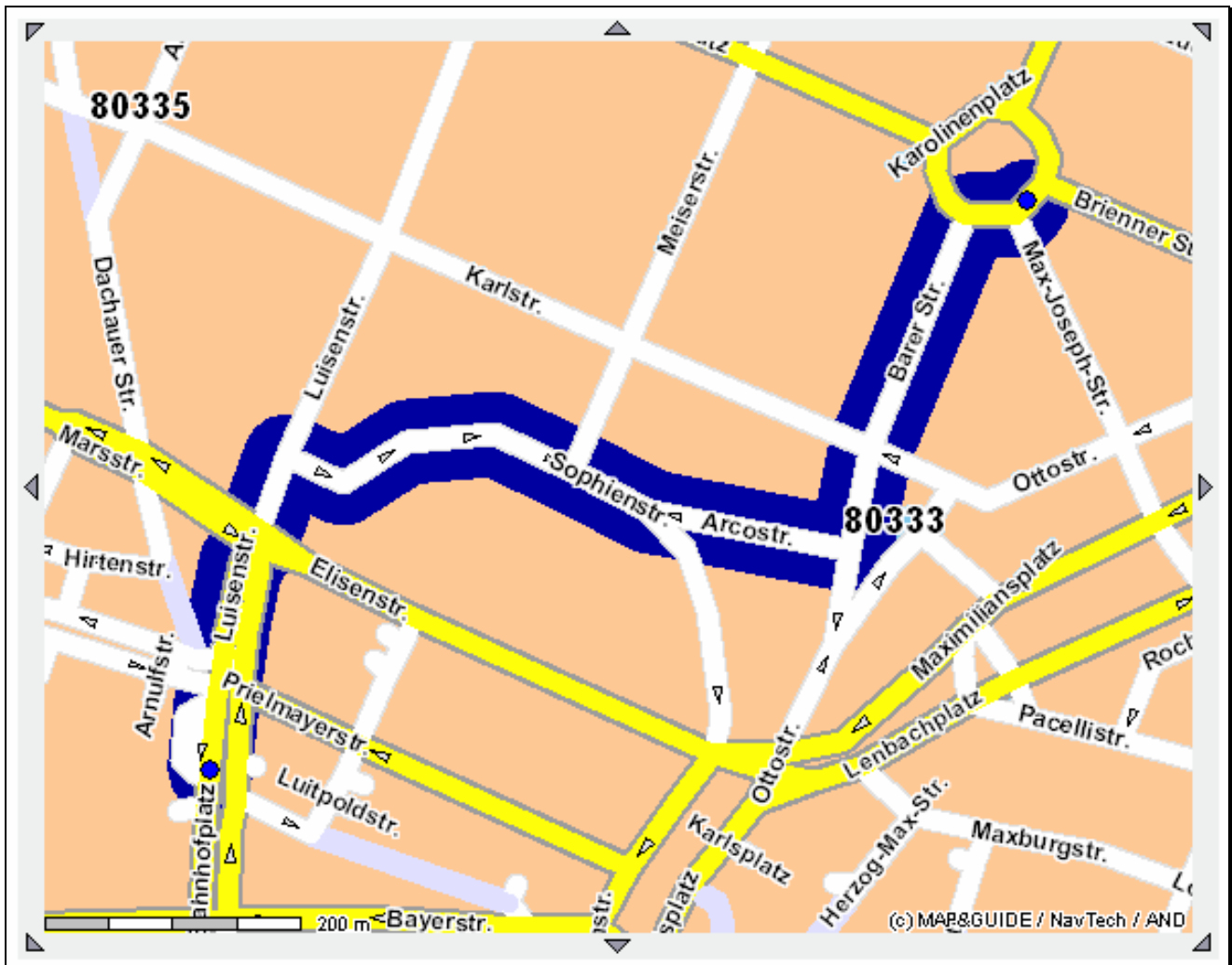


Figure 1 — Jack's route through Munich, from Bahnhofplatz to Karolinenplatz (map and route courtesy of PTV Online)