



The specialists of VoiceXML applications

Web2tel implements and operates the next generation IVR services

Traditional IVR servers rely on proprietary technology. The VoiceXML technology implemented by Web2tel brings the benefits of open standards: cost reduction thanks to increased competition, seamless integration with other applications, leveraging of Web technologies and tools, and accelerated time to market. Web2tel's superior VoiceXML skills allow to considerably reduce capital and operating costs of IVR services.

Web2tel is a spin-off from [Lucent Technologies](#), whose research arm, [Bell-Labs](#), initiated VoiceXML. Lucent Technologies is a founding member of the [VoiceXML Forum](#). Web2tel Qualifun is a member of this Forum.

The Web2tel team features more than 15 years of experience in R&D, consulting and technical support of advanced telecom products. This know-how allows Web2tel to commit on the reliability, availability and user-friendliness of its solutions.

The VoiceXML technology implemented by Web2tel can reduce your IVR costs:

- You can freely select your voice services provider at all times.
- You keep full control of services upgrades.
- You deploy the services closer to the user, with no extra cost.
- You publish information instantly, thanks to built-in speech synthesis.
- Your IVR service is more user-friendly, thanks to built-in speech recognition.
- Your IVR service complies with Internet standards.

Web2tel's VoiceXML applications are tailored for:

- [Web sites](#) looking for means to reduce user churn, get a competitive advantage, and increase revenues.
- [Corporations](#) aiming at cost reduction of their IVR services.
- Platform [vendors, hosting providers, and network operators](#) who want to extend their value proposition with tailor-made VoiceXML applications.



Web Sites: an IVR service for your interactive content

The valuable contents of your Web site are accessible only via the Internet. Thanks to Web2tel's IVR service, your users benefit from one additional channel: they access your contents over the phone, with complete freedom, quickly, and easily. This is a competitive advantage for your Web site, and, what's more, you get additional revenue.

What are your end-user benefits?

- They can freely access your contents, including from places where they have no Internet connection. It is as simple as placing a phone call.
- They access your contents instantly. Calling your Web Site is as quick and easy as checking voicemail.

And more:

- Information is updated in real-time between your Web Site and the IVR service.
- You increase the feature set of your Web site, for example by sending contents via SMS.
- Users are greeted personally, thanks to Caller Id.
- Accessing your contents is unobtrusive, compared to a Web page displayed on a computer screen.
- Accessing your contents is secure, compared to the Internet.

What are your benefits?

- A whole new distribution channel. Today, you distribute contents on the Web. Tomorrow, with Web2tel, you distribute the same contents over the phone.
- You delight your users with supplemental services. In every location where they can place a phone call, your users can dial in, listen to the voice of their favorite Web Site and obtain the desired contents.
- Your Web Site gets a competitive advantage. By offering phone access to your contents, you extend your site and give your users one more reason to elect it.
- You increase your revenue, thanks to the phone calls. You receive a pay-back from Web2tel based on the call traffic generated by your Site.

Why Web2tel ?

- You benefit from an unrivalled business model. Thanks to VoiceXML technology, Web2tel can develop and operate the IVR under exceptional conditions.
- It's a win-win partnership. You receive revenues directly linked to the service popularity (see Figure 2).
- You remain focused on your Web Site and your familiar technologies: Web2tel completely takes over IVR development, operations and maintenance.
- You benefit from a superior quality IVR: reliability, availability, user-friendliness, and real-time synchronization with your Web Site.



Examples:

- **Games and lotteries:** Some Web sites offer a limited number of free games per day. When players are unable to connect, they are missing an opportunity to try their luck. Thanks to Web2tel, they can play over the phone and maximize their earnings.
- **Auctions:** When buyers bid, they can be overbid at the last minute. If they are unable to connect at the critical time, they simply miss the deal. Thanks to Web2tel, they can be alerted via SMS, call in and place a new bid if they decide to.
- **Dating:** The human voice is emotionally-loaded, far more than the text of a personal, even with a picture. Thanks to Web2tel, users can record their voice together with their ad. They can contact other users. The telephone is still the easiest way to express your feelings.

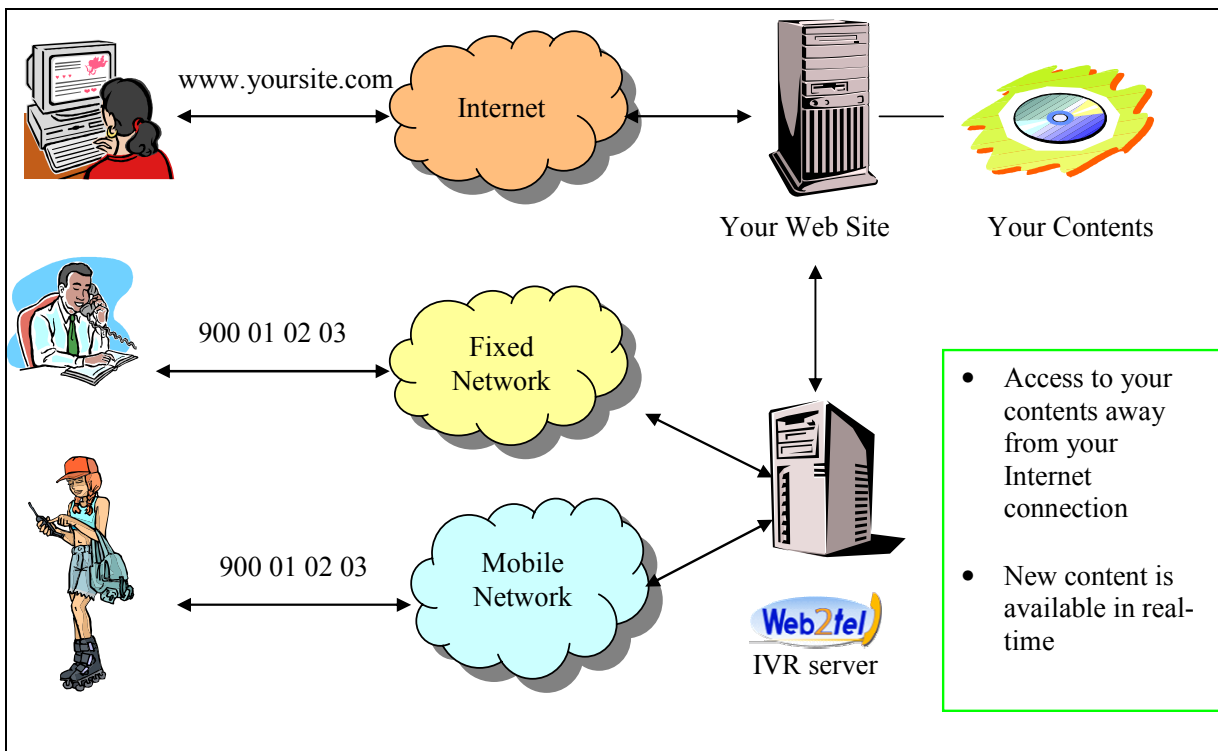


Figure 1 — System overview



Demo

Our demo service is available 24x7 at +33 (0)4 34 08 02 17 (currently in French only). It exhibits the following features:

- How Web contents can be distributed over the phone. The demo application plays airline timetables. The *same* demo application is available on our Web site (French or English).
- How Web contents can be played in real-time. Select the language of your choice (six languages are supported), and type your own text on our Web site. Then, call the demo service and listen to it immediately.
- How Voice contents can be added to your Web Site. Record your own voice on the demo service. Then, listen to your recorded voice on our Web site.

The demo service on the Web is available at www.web2tel.net. Select the English version in the lower left corner. Click on “Web Site”, and then click on “Demo”.

Assumptions:

- 25,000 active users
- 1 call per week per user (average)
- 3 minutes per call (average)
- User costs: 0,34 € per minute
- France Telecom *Audiotel* contract conditions
- 30% of operator pay-back is paid to the Web site

Capital expenses:

- Development of the IVR service:
→ On Web2tel

Operating expenses:

- Operation and maintenance of the IVR service:
→ On Web2tel

Operating income:

- Web2tel pay-back to Web Site
→ **219 960 € per year**

It's a winning deal!

Figure 2 — Evaluation of Web Site revenues (for illustration purposes only, not a formal offer)



Corporations: Reduce your IVR costs

You offer, or plan to offer, an IVR service to the public. The development and operating costs of such a service can be substantially high. Maintenance costs build up quickly, especially when the contents are updated frequently. Thanks to Web2tel's VoiceXML technology, you can now reduce those costs.

How Web2tel can reduce costs:

Traditional IVR servers rely on proprietary technology. When you decide to outsource your voice services to a traditional operator, you become locked-in by the operator's technology. After the service is developed and commissioned, it is very difficult to bring in other operators. In this case, moving to a competing operator is a tough job: it basically means having the application entirely redeveloped.

With Web2tel's VoiceXML technology, thanks to language standardization, the application can be ported between competing operators with little or no change. You can request operators to compete, and thus reduce operating costs.

When your audience is international, the comparison between proprietary and VoiceXML IVR servers is even more compelling. A proprietary IVR server is physically located in the operator's hosting center. If the service is open to international users, the phone calls must be routed to the hosting center, which adds extra costs (Figure 3). With a VoiceXML IVR server, you can now eliminate these extra costs: you deploy each VoiceXML Gateway as close as possible to the end users, while keeping the software centralized on the application server (Figure 4)

In short:

VoiceXML technology enables substantial cost reductions in development, operations and maintenance for the following reasons:

- Portability enables efficient competition. With VoiceXML, you can select your voice services operator at all times.
- Portability lets you deploy the service as close as possible to the users with no extra cost. In the case of an international audience, you save the costs of routing the calls to the IVR server.
- Speech synthesis and recognition technologies are built-into VoiceXML, which eliminates software integration concerns, and speeds time to market.
- Built-in speech synthesis:
 - Makes information available in real-time, provided the information at stake is readily available in text format. You save the time and cost of human voice recordings, while retaining a good speech quality.
For example: News, memos, sports results, stock market data.
 - Lets you create better sounding voice services. It avoids the tricky concatenation of recorded speech chunks, which makes artificially sounding sentences.
 - Lets you create and update services quickly and easily, when recorded speech inappropriate.
For example: Directory lookup, financial data, and real-time transportation timetables.

- Considerably reduces maintenance costs, by reducing or eliminating the need to re-record human speech for every service update.
- Speech recognition lets you design more user-friendly IVR services. Instead of tedious touchtone menu selections, users just have to utter their request.
For example: Instead of selecting an airline, departure and arrival cities, in endless menus, the user just asks “Tell me the arrival times of British Airways flights from London to New-York”.
- VoiceXML relies on Internet standards, which brings a hoard of powerful tools, often at no additional cost.

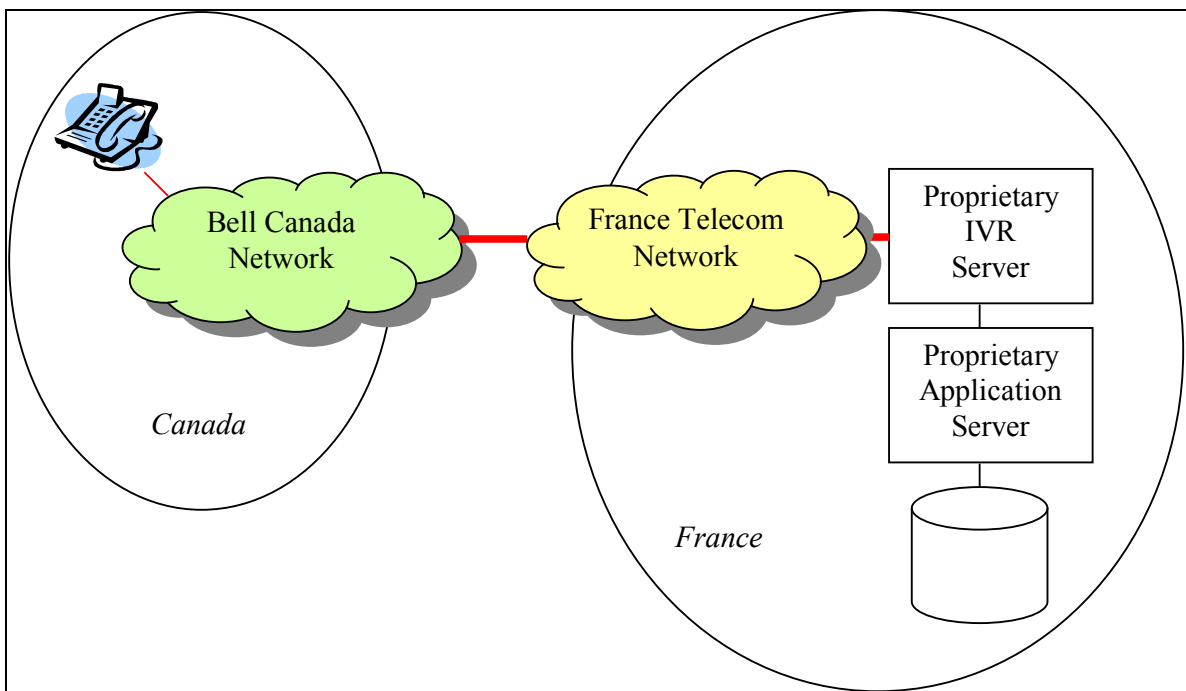


Figure 3 — International call to a proprietary IVR server. The call is charged at the international rate.

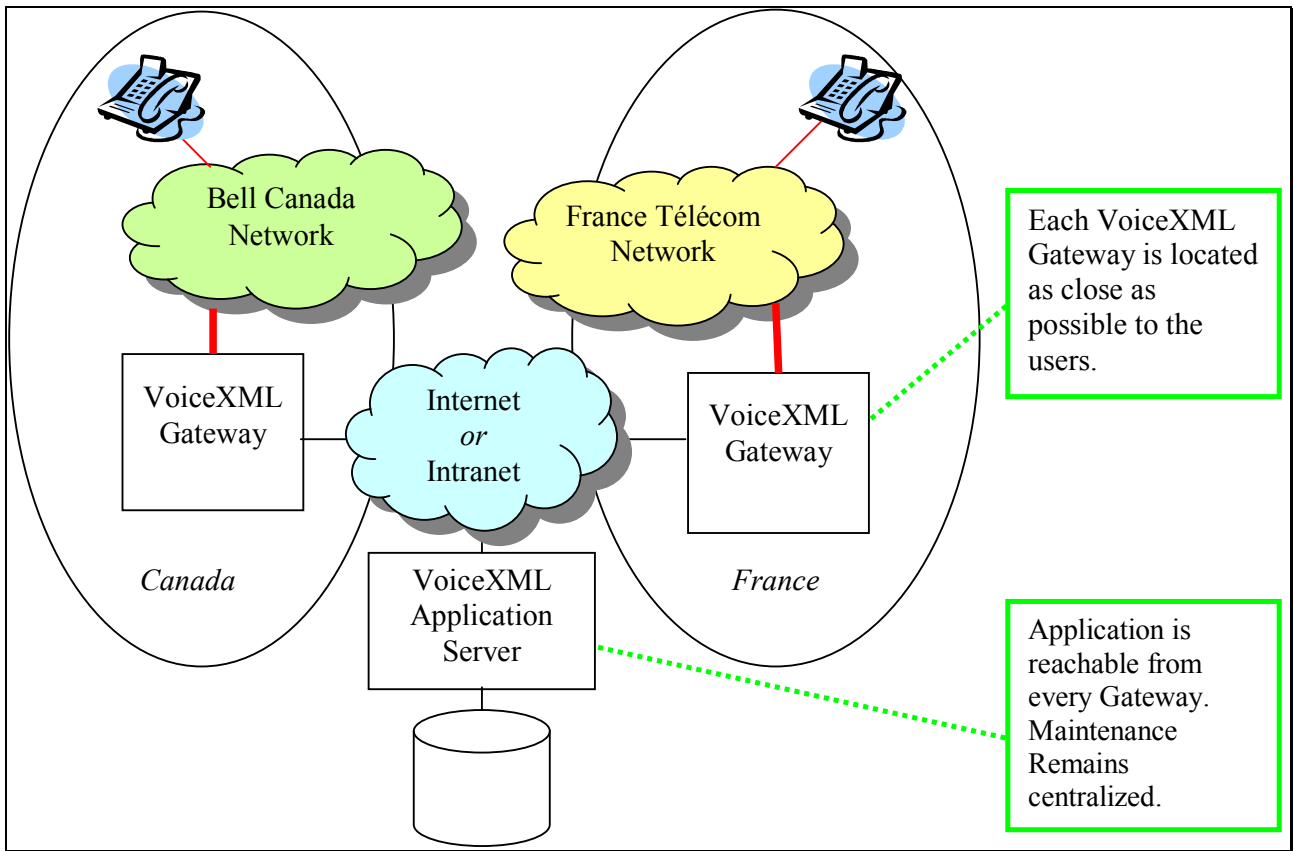


Figure 4 – Calls to a VoiceXML IVR. Each call is charged at the national rate.



Vendors, hosting providers and telecom operators: provide end-to-end solutions

You are a VoiceXML platform vendor, hosting provider or telecom operator. Your customers want to implement IVR services, but they lack trained and experienced engineers. Thanks to Web2tel's skills, you can fully meet their expectations.

What are your benefits?

- You delight your customers by offering a global, turn-key solution: development, operation and hosting of their IVR services.
- You rely on an experienced partner, fully proficient in VoiceXML, and aware of the capabilities of your technology.

Why Web2tel ?

- Web2tel Qualifun is a member of the VoiceXML Forum and has extensive knowledge of VoiceXML technologies, tools and platforms.
- Web2tel is a spin-off of Lucent Technologies, and is accustomed with telecom operations techniques and constraints.
- Web2tel is fully committed to provide high quality solutions, in particular regarding reliability, availability and user-friendliness.

Web2tel has the right skills and experience to quickly develop high-quality IVR applications.

Web2tel operates in particular the following technologies:

- VoiceXML platforms from leading manufacturers: Eloquant, VoiceGenie, Voxpilot.
- Academic VoiceXML platforms: OpenVXI, Elvira.
- Sound Engineering: Sound Forge from Sony Media Software.
- Dynamic VoiceXML page generation on Linux / Apache / MySQL / PHP / SSL servers.



About VoiceXML

VoiceXML is a language of the XML family. It is specifically designed to describe voice user interfaces. Its primary goal is to bring to speech applications the methodologies and tools which made the success of the Web. VoiceXML actually is to speech applications what HTML is to visual applications.

The main strength of VoiceXML is standardization. A traditional IVR application can function only on servers of the operator owning its proprietary technology. On the contrary, VoiceXML applications are portable. They can function on the most appropriate servers at each stage of their lifecycle.

A VoiceXML application is made of multiple resources:

- VoiceXML scripts, which define the contents and sequencing of dialogs between the user and the application.
- Pre-recorded audio, which the application plays during the dialogs.
- Text, which the application plays with speech synthesis.
- Speech recognition grammars.
- ECMAScript (JavaScript) resources which make up VoiceXML dynamic capabilities.

Those resources are stored in an application server. They are loaded via HTTP, HTTPS or, optionally, other protocols. They are played by a dedicated server called "VoiceXML Gateway". This is the only server actually connected to the telephone network (see Figure 5).

The resources may be static or dynamic. Interpretation of those resources by the VoiceXML Gateway lets users access the desired interactive content.

An Internet standard for the telecom world

A preliminary prototype of VoiceXML, called PML (Phone Markup Language) came to life in 1995 at [Bell Labs](#), the research arm of [Lucent Technologies](#). VoiceXML is now a proposed standard of the [Voice Browser Working Group](#) from the World Wide Web Consortium (W3C). It is promoted by the [VoiceXML Forum](#), founded by AT&T, IBM, Lucent Technologies and Motorola. Web2tel Qualifun is a member of this Forum, which gathers more than 350 organizations.

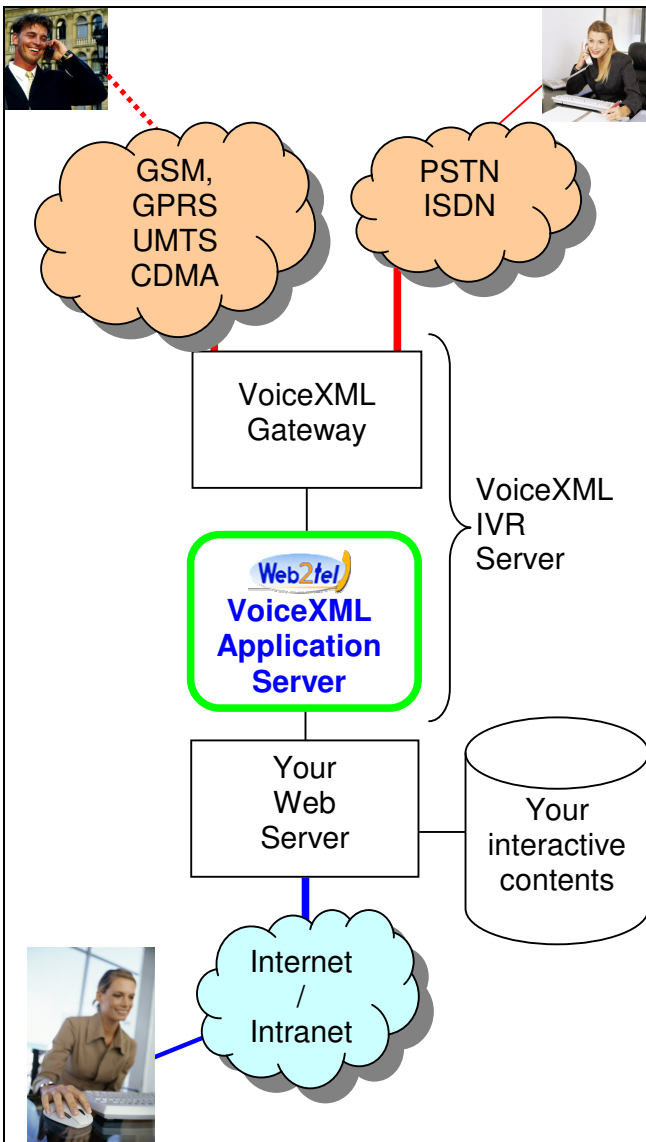


Figure 5 —VoiceXML reference architecture

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