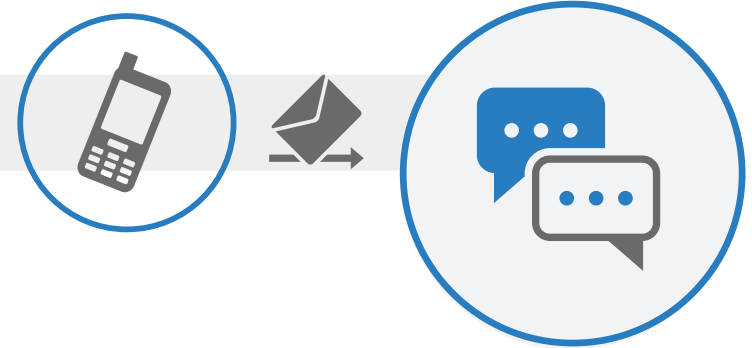# bandwidth

voice application development

10 BIGGEST MISTAKES TO AVOID

10

How to Avoid the
10 BIGGEST MISTAKES
in Voice Application Development

Are you building the next generation mobile app that provides users anytime, anywhere voice and messaging communication? Maybe you're integrating voice and messaging into your existing web and mobile application for the richer social interaction that only voice can deliver. Perhaps you're a retail marketer that's launching mobile click-to-call campaigns and creating new opportunities for insightful call analytics solutions.

No matter what the use for your new voice application, integrating rich telephony into your applications has never been easier. But to be successful, you need to deliver both the high-quality experience your users expect and the scalability your application requires.

We have compiled a list of **10 of the most common voice application developer mistakes**. Read on to find out how you can avoid them while developing innovative applications that delight your users.

1 Using "Dirty" Numbers and Not Even Knowing It

You dirty, dirty number! What is a dirty number you ask? Ever dial a wrong number? Yep, it happens to the best of us. But what if your number has been published, or used in a click-to-call ad campaign, or a sweepstakes, or printed on someone's business card?

A **dirty number** is one that comes with a **checkered past**. Some examples of "dirty" numbers include:

- A number from another business, resulting in your users getting calls from someone thinking they are talking to that business.
- A number from an outbound marketing campaign that could have been blacklisted.
- A number from an inbound marketing campaign that is still listed in residual materials like flyers, advertisements and stale Internet listings.

How do you avoid dirty numbers? The answer is **number management**. Effective number management is important for every voice application because it can have a huge impact on user experience. Some voice network providers, such as inetwork, help you manage this process, while others leave it all in your hands.

Ask yourself, what level of quality will your users expect? Do you need to have a single number in a specific region to test an idea? Would you like to guarantee that the next contiguous number is available? Maybe you want to reserve the next contiguous 100 numbers. You need to think of these things early in the development lifecycle. Otherwise, your application could fall flat.

2 Not using Open Communication Standards

Just like in other ecosystems, open voice apps ensure you are free to adjust technologies, providers and investments as you grow.

When you use **open standards**, your app can grow like wildfire using **any network in the world**. But if your app is built on provider-specific, proprietary standards, unforeseen limitations can squelch your app's flame just as it starts burning.

Look for a voice network provider that relies on open standards, particularly one with proven, fast and intuitive onboarding procedures like inetwork, so your success isn't locked into someone else's propriety solution.

3 Failure to Look Past Your Initial Success

We all dream of success, but what happens when your dream comes true?

The last thing you want is for your service to tip over because your "quick download" open source package just crashed or your bank account ran dry because that cheap entry level pricing only worked in the "start up" model. What's the value of handling hundreds of thousands (or even millions) of transactions if the economics aren't working or the operating model is too complex? Take the time to appropriately **model both the technology and the finance behind your application**.

Compared to scaling for mobile and the web, scaling for voice requires a slightly new paradigm. Don't worry, you can bring your skills from other systems with you, but get ready to either learn something new or find a provider that can do the heavy telecom lifting for you.

You need to consider the required bandwidth for your transactions, so that your voice network is provisioned to scale in parallel with your application. What is the soft switch processing power you'll require? Some media types require more CPU power than others, as will the number of features (conferencing, voice mail, SMS, call waiting, etc.) you will enable for each phone number.

Choosing a network provider, such as inetwork, that handles traffic daily for leading customers operating at a massive scale, can be a major catalyst to your success. We can help you scale your network, predict long-term expenditures and determine the best solution for your goals while you focus more of your time on application development.

4 Not Considering Tax Issues

Voice services are regulated and taxed at both federal and municipal levels. Not every application you develop will have tax implications but it's important for you to **understand your tax liabilities before you go to launch**.

inetwork has a team of experts that stays tightly connected to this dynamic landscape. We can direct you and your legal counsel to items you should consider when developing your communication platform. Not every provider offers such advice, but it's a skillset you should look for when selecting a voice network partner.

5 Ignoring Security Risks

Heard about **phreaking**? Well, according to Urban Dictionary, phreaking is a form of hacking, as applied to telephone networks. Phone phreaks exploit weaknesses in the phone system to make long-distance calls for free, tap into other's calls, take control of lines, get free phone services, and the like. (Urban Dictionary. Retrieved from http://www.urbandictionary.com)

Unfortunately, the phreaking industry is alive and well. Most mobile and web developers are aware of general Internet security practices but few understand that voice adds a new dimension.

Voice application developers need to be aware of the inherent risks they take on when utilizing any major network. There is a **vast underworld** of hackers taking advantage of network holes. These hackers sell black-market products like pre-paid phone cards using your VoIP resources for fraudulent unauthorized calling. They steal your network time, rob you of revenue and can give you a bad reputation.

If you don't have measures in place to ensure network security, your go to market strategy can quickly break down. Look for a provider like inetwork, that owns, operates and monitors its own network to help safeguard its customers.

6 Improper Use of SMS Long Code vs. Short Code

A long code is +1 (XXX) XXX-XXXX and a short code is 55555. Simple right? Well, not so fast. What should you be using in your application? It depends.

Long codes are phone numbers that have been specifically configured to work with SMS. Unlike **short codes**, they're formatted like traditional phone numbers, because they are phone numbers. Application developers and service providers use long codes for **voice traffic and texting**.

If your application seeks to broadcast one-way communication, you should use short codes. This is also called application to person or A2P. For two-way person-to-person communication, or P2P, long codes are more appropriate. Why, you ask?

The telephony world is an ecosystem of multiple carriers with an agreement on the proper handling of A2P and P2P traffic across network boundaries. Abusing long-code for A2P communications may result in the termination of your carrier access. **This is a universal rule, no matter which carrier you select.**

Imagine building your business or marketing effort and using the wrong type of number for your campaign! You could either risk paying too much for a short code when you don't need one or worse, getting shut down by your carrier because you used a long-code incorrectly.

It's true that the provisioning of short codes takes more time and money than provisioning long codes. But if your application requires SMS, you can't afford to take the risk of using the wrong protocol. inetwork understands the nuances of SMS code provisioning and can help guide you through this confusing process.

7 Selecting a Network Without Live Support

You don't need it until you need it, but when you need it, you really need it. **Support.** Not just for billing questions or basic technical inquiries, but real support. Your customers expect that from you and you should expect that from your network partner.

Unlike traditional mobile or web experiences where users have been trained to "refresh," users of voice applications have very high quality and availability expectations, and your **users will expect nothing less in your app** even though it will be facilitated over the Internet. Frankly, users don't care. Your 24x7x365 voice quality better be solid.

Voice application developers need to choose network partners who understand the whole communications stack and will be there anytime they have a question. For something as important as your next great application, you can't afford to leave voicemails or log questions in a public support forum and hope for a response.

inetwork offers its customers **24/7/365** support so that you never have to second guess your network, or deal with a middleman to get the answers you need.

24
7
365
SUPPORT

8 Using a Network Partner that Doesn't Know Software

Voice app developers often make the mistake of choosing network partners who either:

    1) don't know software or

    2) don't know telecom

It's important that you choose a provider that understands both software development and how telecom networks operate.

As both a telecom provider and a company that builds lots of software, inetwork has unique DNA and partners with developers like you every day. We understand telecom and we know what it takes to get your application up and running while avoiding beginner's mistakes.

9 Not Prioritizing Voice Quality

Users today have extremely high expectations for voice quality. So high that they'd rather hang up the phone than accept scratchy/hissing artifacts, dropped speech, "tin can" effects or echoes in their connection.

There's **no excuse for poor voice quality** and the only way to ensure that quality is to partner with a company, such as inetwork, that owns and operates its own network and understands everything about voice. If you're developing an application and this isn't one of your top priorities, you need to rethink your strategy.

10 Selecting a Network Partner that's Not Flexible

When you're working to deploy a new voice app, time to market is critical. **You need a network partner who can help you rollout service quickly—but will also do it right.**

Avoid the pitfalls of choosing a niche player that can't grow with you, or a monolithic company that's not nimble and flexible. Choose a partner who owns their own network and is focused on meeting your time to market goals and ensuring quality.

inetwork has a history of working with emerging startups and managing the growth of their communications needs from idea conception to web scale.

Flexible

Summary

Developing voice applications is a complicated and exciting business, and it can't be done in a vacuum. When you select a voice network partner that understands the process from idea conception to deployment, you have a powerful ally on your side.

Bandwidth helps voice app developers bring their big ideas to life, and avoid the big mistakes that can sometimes get in the way. Let us show you how.

Contact us or visit our **Resource Center** for more information.

For more information: 855-864-7776 | sales@bandwidth.com | www.bandwidth.com