Nuts & Bolts:

The phone of the 22nd century will no longer be a handheld device – it will hug the back of the wearer’s neck and will not reach up to their ears. By utilizing bendable circuitry, the phone will be made so that it can bend – conforming to the user’s neck comfortably for extended periods of time. To deliver sound to the user, the phone will use a bone conduction speaker – transmitting sound through the vertebrae in the neck to the skull and into the bones of the ear. The phone will use the combination of a standard microphone and bone conduction to deliver improved sound quality and enough background noise to give the other conversant clues to the activity surrounding the user.

Instead of using a keypad, the user will speak commands to the phone, directing it to call a contact, a direct phone number, or more commonly, perform a search for whomever they wish to call.

By wearing a specialized pair of glasses, the user can have a visual interface and can view internet sites and visual media as well as augmented reality items based on location sensitive tags. The glasses will contain displays, and will communicate wirelessly with the phone. Fortunately, by 2100, battery technology will have advanced significantly so that the frames of the glasses will themselves be the battery that powers them.

Being around the neck of the user allows for additional functionality – specifically it allows the phone to read subvocalized speech of the user – The user can wear the phone, and send silent messages quickly, without tapping out text.

As a user makes plans whether in person or over the phone, the phone will note the time, date and locations mentioned and offer to add the plan to the user’s calendar. This calendar, along with all of the personal information contained on the phone will be secured through pass-phrase, voice-print, and possibly other biometrics.

Social Awareness:

Loud, obnoxious ringtones will be a thing of the past. For one thing, the phone will alert the user of calls by broadly audible ringtone only if the user is not wearing the phone, and for another it will be aware of the social situation of the user. The phone will gain some insight into the social context of the user through a combination of location awareness and the IDs of surrounding phones. By identifying those around the user (via short-range wireless link) as friends, co-workers, familiar strangers, or total strangers, and by factoring in the social connection of the caller to the user, the phone will choose whether or not to alert the user to the call at all, or to send the caller directly to voicemail – with customized messages to let the caller know they are not simply being ignored. The phone will take into account in what situations the user has answered calls in the past and from whom, and the user can structure filters and set up white- and black-lists that are situationally aware.
When the phone does decide to alert the user of an incoming call, it will do so either through directed sound, audible only to the user, or through tactile stimulation – either a poke, a chill in a metal plate against the skin, or through visual cues, if the user is wearing the accompanying glasses.

When the user is on a call, or is viewing media on the glasses or listening to music, the neckband of the phone will glow subtly in different colors – one to indicate each action. This glow should help alleviate the confusion that exists today when someone uses a Bluetooth headset. The glow can also be set by the user to communicate several things – do not disturb, looking for conversation, looking for an opponent for a phone-based game – or can be set up as a ‘mood-ring,’ giving those who constantly update their Facebook statuses and Twitter messages another way to let everyone know exactly how they feel right now.

Being location aware will allow phones to introduce people with common interests, if both decide they want to. For example, chess players could seek out nearby opponents while both were on lunch break, and could even note their relative skill ratings and whether they can be expected to finish a game in time for each to get back to work.

Different groups of people will seek out different features in the phones, and so they will likely be sold in various models. They will first be adopted by businessmen – due to their greater functionality, contextual sensitivity, and the direct integration of their calendar and scheduler into their life. As they become more visible and mainstream, they will follow a similar path of adoption as smartphones have seen in the past few years as features increase and prices decrease – from businessmen to general consumption. The addition of the mood-band and the ability to voice-tweet will spur adoption by teenage girls. By that point, nobody will think of them as “those newfangled neck-phones.” They will just be phones.

People will not necessarily be more aware of their social surroundings, more tactful, thoughtful or polite – but their phones will be. They may even remind their users to call their mothers once in a while.
(not visible)
bone conduction speaker, subvocalization sensors

Context dependent light strip

Ambient noise mic

By utilizing bendable circuitry, the phone is made flexible, and will conform to the neck of the wearer.

This is the mustache of the future.