To: jjacobs[jjacobs]
From: Prashant Kantak
Sent: Tue 8/11/1998 1:36:28 AM
Importance: Normal
Subject: ParkerVision
Categories: text/plain; charset="us-ascii"

Jeff,
Obviously, not the same person I was talking about! I thought this was one
of that Jeff's
many companies.

Anyway, on to this one, it just sounds too good to be true! This is
virtually the holy grail
of RF receiver designs -- achievable and within practical limits! In
recent years, with the advancement
of DSP technology, there's been a push toward digitizing closer and closer
to RF frequencies in
receivers, but with the huge amount of processing power required to do
this, it becomes
impractical/expensive, especially in portable equipment.

Operation of an RF receiver:
Most receivers (tunable over the receiving range) convert their receiving
frequencies to an
intermediate (constant) frequency (IF) for further processing. In this
manner, even though they
may receive signals over various incoming frequencies, most of the
processing can be done
in IF thereby leveraging common components (that don't need to be tuned or
switched in and
out each time you tune in to a different frequency).

Consider the common FM radio, for example. The RF (front end) receives
signals between
87MHz to 108MHz. This front end has the ability to tune in to a particular
frequency depending
on the station selected. Once this signal is tuned in, it is scaled down
to a lower constant frequency
(let's say 455KHz) regardless of the frequency it was received on by the
front end. From this
point, the IF processing stages perform the function of extracting the
baseband signal (in the
FM radio case, audio information upto about 15KHz). The baseband signal is
then amplified by
audio amp. circuitry and sent to the speaker.

PRKR's invention:
Claims to emilinate all the IF stages and go from a lean, mean front end RF
to baseband!