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Q: How Do I define The Size of A LABOR POOL of ANALOG ENGINEERS? (Answered, 0 Comments)

Question

Subject: **How Do I define The Size of A LABOR POOL of ANALOG ENGINEERS?**   Posted: 08 Mar 2006 10:57 PST
Category: Computers > Hardware   Expires: 07 Apr 2006 11:57 PDT
Asked by: **booleanchallenge-ga**   Question ID: 705013
List Price: $25.00

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I have been asked to quantify, provide a number identify with facts
that actual amount of degreed individuals in the US who do ANALOG
CIRCUIT DESIGN. I constantly say it is a small pool and now I have
been asked to back up that statement with facts, dta , numbers.
I know that the number of colleges and universities that are teaching
ANALOG ENGINEERING is very limited so I am trying to define as a
result of decreased engineering grads what really is the 'labor pool
or available amount of ANALOG ENGINEERS doing Anlog Circuit Design ij
the United States.
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Answer

Subject: **Re: How Do I define The Size of A LABOR POOL of ANALOG ENGINEERS?**
Answered By: **czh-ga** on 10 Mar 2006 15:21 PST

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Hello booleanchallenge-ga,

You have been charged with getting information that is very tough to
find. After very extensive searching I've found some statistics on
analog engineers that should confirm with hard data your assertion
that the labor pool of analog engineers is very small.

It's surprisingly difficult to get statistics on any aspect of the
engineering job market. A recent study conducted by Duke University
will give you up-to-date information about the number of yearly
graduating engineers. Be sure to look at the tables in the Appendix to
get engineering specialty breakdowns.

http://www.businessweek.com/smallbiz/content/dec2005/sb20051212_623922.htm
http://www.businessweek.com/bwdaily/dnflash/dec2005/nf20051223_7594_db039.htm
DECEMBER 13, 2005
About That Engineering Gap...
Is the U.S. really falling behind China and India in education? Not
really. Take a closer look at the data

http://memp.pratt.duke.edu/outsourcing/
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Download: Framing the Engineering Outsourcing Debate: Placing the
United States on a Level Playing Field with China and India
Download: Appendix

This report is part of an ongoing study to compare the number of U.S.
engineering graduates to those in developing nations, particularly
India and China. This is a complex issue and requires further study
but this preliminary report raises several questions about the numbers
quoted in the popular press. This report was developed by graduate
students of Duke University's Master of Engineering Management Program
in the Pratt School of Engineering under the guidance of Dr. Gary
Gereffi, and Vivek Wadhwa with consulting assistance from Katzenbach
Partners LLC.

Finding specific information about analog engineers is even tougher.
The collective wisdom is that the candidate pool is extremely small
but getting exact numbers of just how small is difficult to confirm.
I've collected a variety of resources to help you with drawing your
own conclusions.

http://www.siliconvalley.com/mld/siliconvalley/13493561.htm
http://www.ee.columbia.edu/~kinget/WhyAnalog/poletti_immune_for_outsourcing_mercury_dec_2005.pdf
Posted on Tue, Dec. 27, 2005
GLOBALIZATION
Immune from offshoring
DIGITAL CIRCUITS ARE ON OR OFF; `ANALOG DEALS WITH THE GRAY'

With digital engineers outnumbering analog ones by an estimated
200-to-1, one headhunter has even said recruiting analog engineers is
like using a pig to sniff out truffles in the forest.

This fairly long article discusses the difficulties of finding analog
engineers but I haven't been able to find the source of the "200-to-1"
digital to analog figure quoted by the headhunter in the article.

I found some resources that approach the problem by discussing
recruiting figures from large analog companies. You can take these
numbers and compare them to the total engineering graduate numbers
from the Duke study and develop your own percentages.

http://www.designchain.com/featurearticle.asp?id=3&issue=spring04
AVOIDING ANALOG DESIGN SEGREGATION

GUIDELINE #2. Cross-pollinate your design chain teams.
Unfortunately, it's often difficult to find engineers who have
multiple skill sets. In fact, "there are only about 4,000 trained
analog designers in the United States," according to Gary Smith, an
EDA analyst at Gartner Dataquest.

http://gtalumni.org/Publications/magazine/sum98/capital.html
Texas Instruments gives $2.2 million to ECE, supports 60 Fellows in
analog microelectronics

"Texas Instruments needs to recruit 500 analog engineers a year," said
Del Whitaker, TI senior vice president. "To put that in perspective,
there are not 500 [graduate-level] analog engineers graduating in one
year [from U.S. universities]....

Another lens for examining the analog engineer market is to look at
market share comparison between digital and analog semiconductor IC
sectors. This could give you additional insights about the need for
engineers in each sector.

http://www.theonlineinvestor.com/industries.phtml?content=is_semiconductors
Semiconductors
Breaking It Down: Analog and Digital

The IC area can be split into digital and analog chips. Analog
accounts for less than 20% of the IC market, but it is characterized
by strong growth trends, high margins and high barriers to entry.

http://dataweek.co.za/news.asp?pklNewsId=19597&pklIssueId=522&pklCategoryID=31
Industrial analog IC market
30 NOVEMBER 2005

Analog ICs constitute the largest market share of industrial
semiconductors, at 18% of the market, and demand is especially strong
now for analog power and special-purpose components.

In addition to the statistics provided here I've also included general
information about analog engineer job market, hiring and industry
trends to help you continue your explorations.

I trust that the information I've provided will help you provide
convincing facts and figures about the dearth of talent in the analog
engineer labor pool.

All the best.

~ czh ~

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ANALOG ENGINEER JOB MARKET AND HIRING
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http://www.reed-electronics.com/electronicnews/article/CA6304488
Building Bipartisan Chips
2/3/2006

Electronic News: Is it harder to find analog engineers now than in the
past? It seems the competition is growing for analog engineers.

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http://www.spectrum.ieee.org/careers/careerstemplate.jsp?ArticleId=c010103
Where the Jobs Are
Defense is booming, and demand is rising in analog circuit design,
power management, and automated design

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http://www.reed-electronics.com/electronicnews/article/CA6274762.html
Linear Targets Analog Expert Shortage
10/17/2005

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http://www.elecdesign.com/Articles/Index.cfm?AD=1&ArticleID=9395
Analog Engineers Are Hard To Find
ED Online ID #9395
January 13, 2005

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http://www.diversitycareers.com/articles/pro/05-augsep/dia_national.htm
March 10, 2006
National Semiconductor wants women analog engineers

Next year Ridgeway anticipates hiring about 200 new employees in the
U.S. About 80 percent of U.S. hires are technical. "We need circuit
design, applications, product and test engineers. Candidates need a
BSEE or MSEE degree and exposure to core analog curriculum."

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ANALOG MARKET AND INDUSTRY RESOURCES
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http://www.databeans.net/report-html_pages/Report-ASMS0305.htm
Analog Application Specific IC Markets - Worldwide
Price: $1,495
Publication Date: 03/2005
Number of Pages: 18
Abstract
The analog application specific market continues to draw new entrants
into this space. With a current market TAM (Total Available Market) of
$21 billion, this segment of the analog industry provides suppliers
with significant revenue opportunity.

This study presents market share data for 34 suppliers, covering 96%
of the overall analog market. Market share data is given for 6 product
categories including automotive, computer, consumer, wireless,
telecom, and industrial.

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http://www.ti.com/corp/docs/press/backgrounder/analog.shtml
ANALOG BACKGROUNDER
Analog: A Fundamental Technology for the Internet Age

Market Conditions and Growth
The analog IC market is a highly fragmented and competitive sector of
the semiconductor industry. Demand for analog has been fueled by the
rapid growth of digital electronics. The Semiconductor Industry
Association (SIA) estimated the analog market at $31.3 billion in 2004
and forecasts it to grow to $33.7 billion in 2006. The industry's
broad application markets, the increasing need for high-performance
analog in digital systems, relatively stable pricing and high gross
margins suggest that the analog IC industry will continue its stable
growth pattern in the future.

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http://www.hoovers.com/company-information/--HICID__1246--/free-ind-factsheet.xhtml
Analog Chips
Companies that design and manufacture analog integrated circuits.

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http://www.engtrends.com/index.html
http://www.engtrends.com/about-databases.html

Engineering Trends

You have reached the organization which maintains the largest, most
comprehensive and most functional databases containing engineering
education statistics.

http://www.usatoday.com/tech/bonus/2004-05-16-bonus-analog_x.htm
Posted 5/16/2004
Digital's domination doesn't mean analog's demise

But the recent focus on digital technology has created a shortage of
analog engineers, says technology analyst Jerry Worchel of researcher
In-Stat/MDR. That could be a big problem as more electronic devices
are adopted, and "analog gets more important," he says.

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SEARCH STRATEGY
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analog circuit design engineer
analog vs digital   industry OR market
total engineering graduates
duke study engineering graduate

Comments

There are no comments at this time.

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