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Conference Call Transcript

TSM - Q4 2002 TSMC Earnings Conference Call

Event Date/Time: Jan. 28. 2003 / 8:00AM ET

Event Duration: 1 hr 25 min

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PRESENTATION

Operator

Welcome to the Taiwan Semiconductor Manufacturing Company's fourth quarter 2002 results web cast conference call. Today's event is hosted by Mr. Harvey Chang Senior Vice President and Chief Financial Officer and Rick Tsai, president and chief operating officer. This call is being web cast live versus the TSM web site at www.tsmc.com and in audio mode. Dial-in lines are in a listen-only mode.

At the conclusion of the presentation we will be opening up the floor for questions. At that time further instructions will be provided as to the procedure to follow if you would like to ask questions. Please be advised for those participants who do not yet have a copy of the press release, you may download it from TSMC's web site at www.tsmc.com. Please also download the summary slides in relation to today's quarterly review presentation. Once again, the URL is www.tsmc.com. I'd like to now turn the conference over to Ms. Julie Chen for the cautionary statement before the main presentation by Mr. Chang and Dr. Rick Tsai.

Julie Chen - Taiwan Semiconductor - Investor Relations

Good morning and good evening to all participants. On behalf of TSMC welcome to our fourth quarter taught results conference call. Before we begin, I would like to state that management's comments about TSMC's current expectations made during this call are forward-looking statements subject to significant risk and uncertainties. And that actual results may differ materially from those contained in the forward-looking statements. Information as to those factors that would cause actual results to differ materially from TSMC's forward-looking statements may be found in TSMC's annual report on form 20 F filed with the United States Securities and Exchange Commission on May 9th, 2002. And such other documents as the company may file with or submit to the SEC from time to time. And now I would like to turn the conference call over to Mr. Harvey Chang, our Senior Vice President and Chief Financial Officer. Harvey.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Good morning and good evening to everyone. And welcome to our quarterly review conference call. I would like to begin today's conference call by making some comments on the fourth quarter results and then I think that we will proceed with Q&A. And currently we scheduled to have finished this call in about 75 minutes. That will be 9:15 U.S. time, 10:15 in the p.m., Taiwan time.

Let me begin by reviewing the fourth quarter results. Our fourth quarter revenue for 2001 is roughly 41 billion NT and gross profit around 10.6 billion NT, operating income 5.6 and profit after tax, 1.5 billion, which is roughly cash equivalent to EPS of 13 cents.

And we look at year 2002 on the total basis and the total year revenue. It's 160 billion and the gross profit roughly 51 billion and the operating income roughly 34 billion. And net profit after tax 21 billion, which is cash equivalent to EPS of \$1.14. If we compare -- a quick comparison between the 2002 results with previous year 2001, we will see that our revenue growth are roughly 28 percent. And gross profit, roughly 43 percent. And net income, roughly 49 percent. Our EPS, \$1.14, versus 2001 EPS, 75 cents. Let me give you some highlights of the fourth quarter operating results. I already talked about sales and net income EPS.

And a quick look at the balance sheet side. We finished the quarter with roughly 61 billion cash on hand. Debt remains around 39 billion, which makes us measurably a debt free company, shareholder equity at 295 billion. Total [inaudible] in the quarter is 682,000 K wafers. Utilization during the quarter is 61 percent.

Year-over-year comparison, if we compare the fourth quarter of 2002 with fourth quarter 2001, we see that fourth quarter 2002 had about 24 percent gross on revenue. However, gross margin was down to 26 percent from 33 percent. And the operating income down by four percent from 5.8 to 5.6 billion and the biggest reason for the dropping margin is the depreciation and amortization is much higher.

If we turn to the next page, you will see that the depreciation and amortization for fourth quarter 2001 was roughly 12.4 billion. For this quarter it's 16.1. so that has actually a big impact on the gross profit. As to other changes on the balance sheet, appeared two years ago, I think the biggest change is we're holding a lot more cash now. Our cash position now is 51 billion versus 33, which I will have already talked about.

If we look at our quarter-over-quarter comparison, compared with third quarter last year, revenue wise there's a modest three percent growth. However, gross profit down from 32.2 p percent to 26 percent, are part of the sales in fourth quarter coming from sale of finished goods inventories that was on the book at the end of the third quarter.

As you can see, if we take a look at -- a close look at the inventory, that at the end of the third quarter last year, we have inventory totaled roughly 13.3 billion, including 1.1 billion raw material, 8.7 billion of work in process and 3.5 billion finished goods. If we come to fourth quarter, the amount of inventory totaled was reduced by 3 billion. So they reduced from 13.3 billion to 10.3 billion. And all of which raw material roughly at one billion so not much change. Work in process reduced from 8.7 to 7.5 and also finished goods reduced by 1.7 billion. So this is what we're referring to.

But if we look at also second quarter last year, finished goods balance was roughly one billion total. Between one billion end of second quarter and 3.5 billion end of third quarter, there's a big difference. Now we're back to 1.8, which is considered to be in the normal range. So this is one reason why when our revenue increased meanwhile our utilization went down. Because the utilization went down from 79 percent, which was in third quarter, to 61 percent. So the total fixed costs that went up. And therefore the gross margin dropped from 32.2 percent to 26 percent.

Okay. Other than the -- we want to talk about the wafer shipment. Actually there's a small increase, a modest increase from 677K wafers to 682 K. But ASP wise it's a modest drop by .6 percent. The other thing I would like to mention is on the R&D expense. Our R&D expense is 3.6 effect million which is much higher than the 2.8 billion in the third quarter. As a result our total operating expense was higher than the third quarter and our operating income for from 8.3 billion in the third quarter to 5.6 billion.

The other factor that has also caused our net profit to go down is because of the downturn of the semiconductor industry. Our investments, Wafer Tag (ph), SMC Singapore (ph) as well as in Vanguard (ph), they suffer from it, their losses increased during the fourth quarter.

The other thing that compared with third quarter is a positive change on the tax expense. As you know, in the third quarter that we have unusually high tax expense. And now as we come to this quarter, the tax expense are now back at normal levels. So that's sort of a quick look at the first quarter financials. And let's take another look on the revenue analysis.

On the revenue side, the first thing we're going to look at is look at the breakdown by technology. You will notice that actually the biggest change is that the .13 micron revenue now accounts for eight percent of fourth quarter revenue and total advanced technology which means .18 and smaller geometries, they in the fourth quarter account for roughly 53 percent, of total revenue, versus 48 percent in the second quarter.

If we take a look at the sales breakdown by application, we will see that computer in the fourth quarter was down from 36 percent to 39 percent now. Communications, 35 percent, up one percent from third quarter. Consumer, 18 percent, down four percent from third quarter. Foundries (ph) three percent, others five percent.

As far as the geometry -- geography break down North America still accounts for 76 percent of total revenue in fourth quarter. Europe five percent, Asia Pacific, 14 percent, which is one percent up. Japan five percent, which is one percent down.

As far as customer tech is concerned, if we look at the fabless percentages versus IDM, actually the fabless percentage went up

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from 64 percent to 68 percent. IDM percentage went down from 35 versus 31 percent

The next chart will give you an idea on the ASP trend as far as on the fab utilization. As you can see our ASP actually has in the past couple quarters basically remained flat. And as far as the utilization is concerned, last quarter was 61 percent which we have already talked about.

Next we're going to give you an idea on the installed capacity for this quarter. Total historical capacity for last quarter was 1.067 million wafers for last quarter and this quarter basically remain flat at 1.068 million versus 67,000 last quarter.

Next graph is the trend, give you an idea on the distribution of different technologies. You can see that at the bottom -- the bottom orange color, that is the point 3, give you an idea that this year we're going to continue to increase our 0.13 capacity.

The next one is a recap of the major events was released to the public that during the quarter. I'm not going to go into the details of that. Then I think we are going to talk about guidance and KPACs (ph) for 2003. Give me a minute so we can show you. As far as the guidance is concerned, based on the current business outlook that we continue to expect that TSMC revenue will bottom out during the course of the first quarter. But we also expect 2003 semiconductor industry revenue growth to be around eight percent, of which it's actually a little bit lower than many of the industry forecasts currently for the year.

Also our experience shows that in the past we'd be able to -- we've always been able to exceed the industry growth rate. And we expect TSMC to continue to have growth rate exceeding the industry growth rate for 2003. For the first quarter of 2003, we expect wafer shipment to decline by a low single digit percentage rate on a sequential basis. And ASP to decline by about seven percent due to essentially flat percentage shipment of the nano-technologies and a general product decline.

I had talked about that, for example, let me elaborate just a little bit. I had talked about last quarter our shipment of the advanced technology is roughly 63 percent. For this quarter, actually, we expect that percentage will basically remain flat. But that percentage will start to go up again I think in the second quarter, 2003. But for this quarter, because we expect shipment of advanced technology to stay flat. So actually it will be a more obvious effect in terms of the price point and pricing pressure on our technologies. Also we expect the utilization to be around 60 percent and the customer demand mix by product location to remain similar to that in 4 Q. And the communication will be showing slight improvement. On the K packs (ph) we expect the 2003 K packs (ph) to be in the range of one-to-one and a half billion U.S. dollars. That's my brief presentation for the fourth quarter and I think we will now open up for questions.

QUESTION AND ANSWER

Operator

At this time we will open the floor for questions. If you would like to ask a question, please press star then 1 on your touch-tone telephone. Questions will be taken in the order they are received. If at any time you would like to remove yourself from the questioning queue, please press star then 2. Please limit your questions to one at a time to allow all participants to ask questions from the management members. Our first question comes from Suresh (ph) Balaraman (ph) with Equity Partners (ph).

Suresh Balaraman - Equity Partners - Analyst

Good morning, guys. A couple of questions regarding capital expenditure plan I'm wondering why does such a wide range in terms of what your spending will be and historically you've given more precise numbers even when we had demand that was not great. And I was wondering if there were other factors such as EELs which would determine where your spending for the year would ultimately end up at.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Well, [inaudible] that number is always a dynamic number. So in the past actually we probably changed several times during the year. So I think actually in order not to mislead people, I think actually we give a value range, but still give you a feeling of what the overall business dynamics is like and what the spending is likely going to be

Suresh Balaraman - Equity Partners - Analyst

Can you also comment on how the ramp in spending will be? In terms of Q3 to Q4 a little bit more back end loaded and where do you expect the bulk of your spending? Is it going to be more on copper or 300 millimeter? Can you give us color on that?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Rick, you want to take it?

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

Sure. I think the K packs will be spent on 0.13 micron and the copper at 300 millimeter wafer fab. I think the ramping will be

fairly uniform. The second -- I think the Chairman said in the afternoon that we will see a lot better probably around the mid-year time, to have a feeling about the 2004. I think if we believe 2004 will be more promising, we're probably going to increase the spending in the second half. As you know we do have a single facility ready for the rapid capacity [inaudible]

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Let me compliment that by saying that if we finish the year 2003 on the low side of the range, I think we'll probably fairly evenly distribute it. If we finish the year on the high side, we'll probably back end load it and we'll see more spending in the second half, because it really depends on our feeling of what is going to happen in 2004

Suresh Balaraman - Equity Partners - Analyst

Great. Thanks. Can you also comment on the 0.13 will increase sequentially from Q4 to Q1, you said overall it will be flatish.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We are saying that because last quarter was 50 percent plus and we are saying that for this quarter for advanced technology, which is a total, the sum of 0.13, 0.15 and .18 will also roughly be 50 percent plus. All of which I will say that we'll see some increase I think on the 0.13 side.

Suresh Balaraman - Equity Partners - Analyst

Thank you. Very good

Operator

Our next question comes from Tim Arkuri with Deutsche Bank.

Tim Arkuri - Deutsche Bank - Analyst

Can you tell us the 1-1.5 billion includes anything for fab 14?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Right now, probably not much. Maybe from -- I would say not much.

Tim Arkuri - Deutsche Bank - Analyst

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Not much. Okay. So if you were to spend on fab 14, not saying you would, but if you were, what would the incremental amount be? Can you kind of put a number on that?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We can't.

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

No, we don't have a number, no

Tim Arkuri - Deutsche Bank - Analyst

Okay. Great. And what's the target again for wafer starts in fab 12 by the end of '03?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think we should be able to do a 12 to 13,000 per month

Tim Arkuri - Deutsche Bank - Analyst

And that ramp will be pretty linear through the year?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think so, yes, for the year

Tim Arkuri - Deutsche Bank - Analyst

Okay. Great. Thanks a lot.

Operator

Our next question comes from Mark Fitzgerald with Bank of America Securities. Please go ahead

Mark Fitzgerald - Bank of America Securities - Analyst

Can you help us with depreciation here, kind of the trend going forward? And can you give us a quick explanation how you calculate the depreciation?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

How we calculate depreciation? The depreciation basically goes, the tools, equipment, go five years, three line. Facilities and depends on ten years. Some longer than ten years. If you want to sort of have a quick number for 2003, I would say if you use last quarter's number, kind of annualized it, I think you'll be close.

Mark Fitzgerald - Bank of America Securities - Analyst

Okay. And would you suggest that's going to peak out this year and that you would -- depreciation would come down going into '04?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

It might come down a little bit. But we don't really know right now.

Mark Fitzgerald - Bank of America Securities - Analyst

Okay. Thank you

Operator

Our next question comes from Johnny Chen with Credit Suisse First Boston. Please go ahead with your question.

Johnny Chen - Credit Suisse First Boston - Analyst

I'd like to ask two questions. First question is on your projected first quarter utilization rate of 60 percent. We saw that the latest book-to-bill ratio is about 1.25. Shouldn't that translate into higher utilization rate compared to fourth quarter? I guess another way of asking this is where there's 60 percent utilization rate in first quarter is enough to give you a similar type of wafer shipment that we saw in the fourth quarter.

Second question is on the Low-k. We know TSMC has been very successful in copper with the SG. I'd like to know the status of Low-k and which customers are driving your efforts on the Low-k. Thank you.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I certainly feel confident that the number we give you right now, the roughly 60 percent utilization will give us the amount of wafers that we expect to ship during the quarter. So I'm not sure that

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actually what is your question. Maybe, Rick, you could talk about the other question first and maybe Johnny can come back and talk a little bit more about what he wants to know

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

Low-k, we are running again more volume production. The customer who is writing Low-k usage of course on the performance driven customers right now, moving the communication sectors, the wire line, wire line communication

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Johnny

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

Do you have another question?

Johnny Chen - Credit Suisse First Boston - Analyst

Okay. Thank you.

Operator

Our next question comes from Mike O'Brien with sound SoundView Technology Group. Please go ahead with your question

Mike O'Brien - SoundView Technology Group - Analyst

Good evening. I have a question on your guidance on communications percentage being up a little bit for the first quarter. Could you tell me whether that's more wireless related, wire line? Is it both? What are you seeing from your communications customers? Any worry on the wireless side that there's some kind of an inventory build? Thanks

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

The growth probably came more from wireless than wire line. And the major area for growth is the mobile phone and the wireless LAN. We have a fairly diversified customer base for the mobile phone, the handsets. So I think we're looking at the more balanced picture for the mobile phone. We have quite a several of them, and very different technology.

Mike O'Brien - SoundView Technology Group - Analyst

You may be answering that for the fourth quarter. But I think you may have mentioned for the first quarter that communication may be up as a percentage a little bit. I guess I'm just curious on what's driving that or what's driving communications in the first quarter. Are you seeing any drop-off in wireless offset by an increase in wireline, maybe some of your customers moving to 0.13 micron processes from 0.15. If you could give me more color on the communication side of things for first quarter.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Again, still, the wireless is showing growth in first quarter, along with some of the wire line. Not as strong as wire line growth. Wire line such as the ethernet switch and ethernet niche market seems to have a more moderate growth

Mike O'Brien - SoundView Technology Group - Analyst

Maybe just one final thing on wireless. Do you think that that's -- is that new customer, new customer wins or are your already established customers increasing their wafer starts in the first quarter?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Actually, we're seeing, other than one customer, we're seeing a fairly uniform good demand, both in their demand. Most of our customers are reasonably well.

Mike O'Brien - SoundView Technology Group - Analyst

One final thing on the PC side of things. Maybe what you're seeing there, are you seeing some seasonal down tick post the holiday season for the first quarter from wafer starts or will that be offset by some new product ramp maybe on the graphic side. Thanks

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

In general, yeah, you're right. For the first quarter, the PC segment is showing weaker signs. And we're seeing that in most areas, I mean, the only place that may have some stronger signs, the LCD driver, controllers type application.

Mike O'Brien - SoundView Technology Group - Analyst

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Okay. Thank you

Operator

Our next question comes from Shalesh Jayzee (ph) with Nomura Securities. Please go ahead with your questions

Shalesh Jayzee - Nomura Securities - Analyst

If you could provide some of the data regarding the utilization for the capacities at advanced nodes that is 0.18 and less with exposure capacities

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Generally speaking, the utilization for the advanced technology are higher than the mature technology

Shalesh Jayzee - Nomura Securities - Analyst

Would it be in the 90 plus percent range, can we say capacity are very tight or that would be supply of capacity in that segment?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

No we have not reached that stage

Shalesh Jayzee - Nomura Securities - Analyst

Okay. And for your capex that you have budgeted for this year, roughly what percent of this capex would be going to adding the incremental capacity versus enhancing the process nodes that you look at FT (ph)?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

As I said earlier, the increase will be 0.13 micron capacity. We do not have any plan to upgrade the older technology.

Shalesh Jayzee - Nomura Securities - Analyst

Okay. One final question, if I may ask. If you could provide, because in your guidance you have said that perhaps second quarter both the 0.13 micron and also the overall revenue base should increase. Is it based on your experience of seasonality, or are you seeing some visibility from the customers?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

It's not seasonality. I think it's sort of our general feeling of the industry momentum. I think plus, I think we expect certain customer will be able to deliver in larger quantities of 0.13 to them

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

We're certainly, to compliment Harvey's comments, we're of course working with customers for their demand forecast in the next few quarters. And I think the demand for 0.13 - at least the demand forecast of 0.13 for more customers definitely is increasing over the quarters

Shalesh Jayzee - Nomura Securities - Analyst

Okay. Thank you

Operator

Our next question comes from Matt Gable (ph) with Calypso (ph) Capital. Please go ahead with your question

Matt Gable - Calypso Capital - Analyst

I was wondering if you gave any Q1 guidance on gross margin EPS and if you gave any guidance on total 2003 revenue in EPS.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We don't. We are not allowed to do that by our regulatory agencies.

Matt Gable - Calypso Capital - Analyst

And did you say that 0.13 micron revenue would be down sequentially in Q1.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We did not say that. We said it would be up.

Matt Gable - Calypso Capital - Analyst

Would be up sequentially. Thank you very much for clarifying that. Thank you.

Operator

Our next question comes from Kalpesh Kapedia (ph) with Ungeberg.

Kalpesh Kapedia - Ungeberg - Analyst

The consumer segment which was down 15 percent quarter to quarter in quarries and due to customer inventories and market weakness. What do you see -- you talked about flat percentage composition going into Q1, what do you see in terms of units going into Q1 for consumer segment?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think for Q1 the consumer will stay flat to maybe a minor decrease. There is the seasonal factor will continue into Q1.

Kalpesh Kapedia - Ungeberg - Analyst

Typically seasonally it's down 10, 15 percent for the end market standpoint, exiting Q4. But do you think flat to minor degrees, there's something else going on there?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We don't see -- I think some of our products probably don't really follow the seasonality factor as well, as much as the regular end-market indicators. So I think that particular one may have impact on our mix. I'm not sure that will be consistent with the general market.

Kalpesh Kapedia - Ungeberg - Analyst

What's your view on the general market for Q1? Consumer? What is your view of the general market for consumers in Q1?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think Q1, in general, it's still flat to weak. We don't see a strong first quarter in general

Kalpesh Kapedia - Ungeberg - Analyst

Is that specific strength you have seen, is it related to any particular product or customer or is it just the new product?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

As I said, we do have one specific product I think to behave somewhat differently from the seasonality factor. I cannot really tell you what that product is.

Kalpesh Kapedia - Ungeberg - Analyst

Thank you anyways.

Operator

Our next question comes from Alec Berman with Pangea Capital. Please go ahead with your question

Alec Berman - Pangea Capital - Analyst

A couple questions. Any thoughts yet as far as 90 nanometer, when that might ramp, when that might become meaningful or small percentage of revenues, what time frame that might occur in? And also the wireless, wire line mix, whether you have a sense of mix of wireless and wire line in Q4 and Q1 and a couple of follow-up questions.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

The first question is regarding the 90 nanometers. As we stated before, our 90 nanometer qualification will be done sometime in the end of second quarter this year or early third quarter. We do not really expect volume production for the remainder of the year. Some kind of a volume pass-through might occur near the end of the year, I believe. I don't think I catch your second question well.

Alec Berman - Pangea Capital - Analyst

I was asking about communications and what was the approximate breakdown between the wireless and the wire line piece of communications in the fourth quarter and how did you see that in the first quarter.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

In general, wireless will grow stronger compared to wire line. From point of view, it's also significantly larger, wireless than wire line

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Alec Berman - Pangea Capital - Analyst

Great. Comparison basis, okay. And based on the cap ex you're talking about right now, I don't know if you said it already, what's your assumption, what will happen to your wafer start capacity in 2003 versus where it ended 2002? How much do you think that will grow?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

You're asking assumption, wafer start in 2003?

Alec Berman - Pangea Capital - Analyst

Your capacity. What will your capacity be at the end of 2003 versus what it is right now? What's your guess, based on your current thoughts

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

As you see, our capacity actually increased a little ability a bit last quarter. The last quarter, increased by roughly six percent from roughly one billion to one billion and 60,000 plus. And if right now most likely it will go up to more than 1.1 million per quarter by the time we get to fourth quarter

Alec Berman - Pangea Capital - Analyst

All right. Thanks

Operator

Our next question comes from Greg Punezny (ph) with Piper Jaffray, please go ahead with your question

Greg Punezny - Piper Jaffray - Analyst

Could you talk a little bit about what types of products you're currently running at 0.13 with copper and what types of products you expect to move on to that technology node as you move throughout the year?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think the product covers -- communication to computer such as handsets, computer, TC graphics. Quite a few wire line communication products. So of course the FPGA products, strong

CPU, network processors. I think the ones that will move into 0.13 are probably the DVD players, some of the set top boxes. I think we're seeing more DSL customers are moving

Greg Punezny - Piper Jaffray - Analyst

Is that going to happen gradually throughout the year, or is there a period of the year where you expect a number of these products to move to 0.13 simultaneously?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Probably not necessarily continuously. This is very much customer-dependent, whether they're to utilize over time or not that sort of thing. So I think the intention for them is to move into production sooner rather than later. We're getting pretty steady takeouts every month of 0.1

Greg Punezny - Piper Jaffray - Analyst

Also, I wanted to ask you, based on your current information from customers, what do you think Q2 looks like in terms of what we could see for sequential revenue growth from Q1?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I don't think that we can give you sort of a number right now. But we certainly, the feeling right now is that as we have already stated [inaudible] that the feeling right now is we should hit bottom sometime this quarter and we expect to see sequential growth in the second quarter. If you want me to guess, I would guess that would be a double digit growth on a quarter-over-quarter basis

Greg Punezny - Piper Jaffray - Analyst

Great. Thank you

Operator

Next question comes from Christina Osmeda with Needham and Company

Christina Osmeda - Needham and Company - Analyst

Do the announced capex plans include capex plans for JVs and if not what are they and what were the actuals in 2002

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Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Repeat it again.

Christina Osmeda - Needham and Company - Analyst

Does your capex budget include your capex for the JV?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

No

Christina Osmeda - Needham and Company - Analyst

Could you give us a breakout, please of that?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

For 2003, actually, the cap ex number are actually fairly modest. Wafer tech is below \$10 million. [Inaudible] roughly 30 million and assets SMC around 25 million

Christina Osmeda - Needham and Company - Analyst

Okay. Was it just as low in 2002, and if not could you give us a breakout of that, too?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

2002 --

Christina Osmeda - Needham and Company - Analyst

I'm sorry, I .

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I'm sorry, I don't have that information. Could you send us an e-mail to invest@tsmc.com I'll reply you on that.

Christina Osmeda - Needham and Company - Analyst

Okay. Thanks

Operator

Next question comes from Shalesh Jayzee with Nomura Securities.

Shalesh Jayzee - Nomura Securities - Analyst

Could you share your timetable for expansion plans in China. Do you expect them to keep moving this year?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We don't actually have a timetable because we're not in control of the timetable, our government is in control of the timetable. Assuming we just now come to the first stage of approval and there are a few other hurdles we have to wade through, assuming we'll be able to go through all those procedures smoothly, the fastest I think we can ramp up production is second half next year

Shalesh Jayzee - Nomura Securities - Analyst

I didn't get it. You said second half of next year?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Yeah. That's the fastest that -- if everything moves smoothly

Shalesh Jayzee - Nomura Securities - Analyst

Thanks. Also if you could just help explain the EPS decline which you're guiding forward, despite your expectations of improving product mix.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Yeah, yes, we do expect improvement, pickup in terms of the shipment of 0.13. But at this point that the number of wafers is still not significant enough plus the fact that there are of those 0.13 solutions want 0.15, 0.18, 0.13 so for this quarter we expect total wafers that ship for 0.15, 0.18, 0.13, will be roughly the same. And I think last quarter I think we see pretty good improvement in terms of 0.13 use. And it seems the customer are really buying ties, not buying wafers. So the use went down significantly not buying wafers but the reason why we expect sort of a flat growth that this quarter in terms of advanced technologies.

Operator

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Irene Leo is now online.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Excuse me?

Unidentified Speaker Analyst

I was trying to understand, should your improving years, overall should increase despite you're being paid on DI-basis rather than wafer?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Depends on customer, yeah. It's primarily on tie basis.

Unidentified Speaker Analyst

Okay. Thank you

Operator

Our next question comes from Mark Fitzgerald with Bank of America Securities. Please go ahead with your question

Mark Fitzgerald - Bank of America Securities - Analyst

Thank you. Can you give us an idea in the fourth quarter what the mask business was in terms of percentage of revenues for the company?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

The mask usually account for less than 10 percent of the total revenue

Mark Fitzgerald - Bank of America Securities - Analyst

Okay. And do you have any idea of the number of your customers that are running wafers with you that are using your mask shop?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Most of them. I would say 90 percent plus

Mark Fitzgerald - Bank of America Securities - Analyst

Okay. Thank you.

Operator

Ladies and gentlemen, if you have any additional questions, please press star followed by the 1 at this time. If you are using speaker equipment, you will need to lift the handset before pressing the numbers. One moment please for our next question. Our next question comes from Shaw Lavin. Please go ahead with your question

Shaw Lavin Analyst

A few questions. Just clarifying depreciation. Harvey, you mentioned we can annualize it on a Q4 number basis. But will it actually come down first in the first quarter and then bring some of it, bump in the fourth quarter might be related to the inventory and then ride through the year to get to the annualized number?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

No, depreciation number has nothing to do with inventory.

Shaw Lavin Analyst

So it will stay flat during the year, is that what you mean by taking a fourth quarter number and analyzing it?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Roughly.

Shaw Lavin Analyst

Okay. Now, your guidance that your growth will be higher than the industry. Will it be fair to say that you would be very disappointed if you grew anything less than, say, two times the industry growth rate in 2003?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Yes, those are fair questions. I will not say it's fair or not fair.

Shaw Lavin Analyst

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All right. The inventory sales in fourth quarter, was the gross margin substantially lower than your overall gross margin in fourth quarter?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

You mean -- can you repeat it

Shaw Lavin Analyst

The revenues you generated from the inventories that you shipped in fourth quarter, was that gross margin lower than your overall gross margins, in other words to state substantially lower?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We saw some statements in the analyst reports. Those are not really true.

Shaw Lavin Analyst

Question on pricing, you talk about a general pricing decline, what is driving that? Is it competitive dynamics, primarily and I guess you're saying it's across the board. But then you pretty highly utilize the cutting edge, so why there's pricing pressure and do you think it will sustain through next year or is it sort of a run off early in the year or how does it look?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Basically where we encounter pricing pressure because of the old economic demand and supply law. And then also I think that maybe Rick can help on this, is from customer, I think they migrate from the one technology to another. They also need to be - have to be economically justified to them. So they have sort of their own formal way of calculating this. For example, I think that [inaudible] that 0.18 and technology from 0.15 to 0.18 was [inaudible] but when we further migrate to 0.13, actually there were a lot of challenges and we gradually overcome them. Which means actually the cost of wanting to bring 0.13 is really significantly higher. So as far as the customer is concerned they're still looking at sort of their formula trying to figure out that this is the economically justifiable to them or not. So sometimes we will constantly actually wrestling with seems like that. They don't care what your cost is. And so that's I think cost certain pricing pressure

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

Really the biggest price -- end market pressure. All the high volume product that you can think of or have very deep price production curve. You probably know that better than we do

Shaw Lavin Analyst

Okay. Talking about high volume for 2003. I imagine handsets, wireless handset is probably one of your top growth areas. What will be the other two or three key growth areas in that you would be looking forward to for the year.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We believe the handset, some of the wireless LAN, I think the display devices, some of the consumer stuff, I think the camera and the DVD will continue also growth this year.

Shaw Lavin Analyst

Okay. Let me just step back here and -- make a quick comparison of 2002 with let's say year 2000. The reason for that being the revenues are roughly at a similar level. But obviously the earnings are significantly lower. The biggest difference I can think of is the two. One is depreciation is higher. Obviously your position is a lot lower. So as it improves, there's a lot of flow through, I imagine, into the margins. I was wondering if you would agree with that, that the flow through in the coming year will be very high? And second, is perhaps the other gap that I see is in the non-operating side whereas you had a positive number in 2000, you have I a very large negative number in 2002. And I'm wondering if there are any significant strategic steps you want to do to address that so there are two questions there.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Well, I think that your observation is generally correct that we basically agree that certainly utilization is the biggest factor. Of course our own experience, with respect to those good years, even mature technology, utilization still stay very high. A lot of times they're still fully loaded. But right now I think what we see is that we do see a lot of excess capacity in the more mature technologies. We also see people continue to build in China. I think they're certainly I think effect the loaded number of the mature technology, which will then I think effect the profitability. Your second question, you're talking about.

Shaw Lavin Analyst

Yes, investment income

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Yes, well, our investment is primarily in these three entities, wafer fab, SSMC and Vanguard. Wafer tag and SMSC, they really, they just, in terms of the fab at the wrong timing. So they're not able to run. I think as quickly as they would like to. So that is a problem. But wafer tag actually, we have been paying a lot of attention to get more loading. Right now they are still, I think, useful to certain customers North American and we don't really have any plans in terms of wafer tag. In terms of SSMC, it is there. They have not even reached a kind of peak yet, so I think its sort of a pre-mature judgement.

On the Vanguard, it is an independent company and actually we ought to talk about it this afternoon in the Vanguard release about strategy.

Shaw Lavin Analyst

Thank you

Operator

Our next question comes from Jonathan Ross with Goldman Sachs. Please go ahead with your question

Jonathan Ross - Goldman Sachs - Analyst

Hello. Just two quick questions. First one has to do with Nexsys (ph) and I know it's probably early days there, but you have been trying to position your 90 nanometer offering as a common industry platform. I'm wondering if you're still pursuing this and do you see any traction there, or is it just still too early to say? I'll ask the second question after this.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Yeah, I think the fact that we're building the 90 nanometer technology, together with the, with the other partners in the joint technology development program, basically [inaudible] perhaps you're also right it's probably a bit too early to tell right now. [Inaudible] we're just starting to ramp 0.13 not too long ago. I think that most of the industry, if you look at the companies in the industry, most of them -- and now even 0.13 production yet. You can look at the foundry industry, clearly

Jonathan Ross - Goldman Sachs - Analyst

Great. Thank you. Second question, just quickly related to the book-to-bill that Morris showed this afternoon, right around 1.25. You're guiding for essentially flat shipments in the first quarter. So just a quick question. Is the pickup in book-to-bill you're showing then, is that entirely a function of shipments, in other words the denominator falling, or are orders also rising but you're being conservative in guiding for a flat first quarter? Book-to-bill is a ratio, the numerator you've got orders and the denominator you've got shipments. So the big pickup in the book-to-bill could be a function of shipments falling or orders rising, but you are guiding flat on shipments in the first quarter. So just wondering if that means that the pickup in the book-to-bill is just really past shipments falling off.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think it's in that category and we are not purposely giving you a low number in terms of wafer shipment.

Jonathan Ross - Goldman Sachs - Analyst

Great. Thanks Harvey.

Operator

Our next question comes from Pernaud Kumar de Sarnay (ph) with Daiwa Institute of Research.

Pernaud Kumar de Sarnay - Daiwa Institute of Research - Analyst

First question is basically on 0.13 micron level. If you can give us some color whether you are making money at this particular technology node or especially at the gross profit level or if not when do you think you'll be able to break even in this particular node?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Right now, the volume is not large enough to reach a break-even. But I think that sometimes second half we should be able to reach that level

Pernaud Kumar de Sarnay - Daiwa Institute of Research - Analyst

Next one is on the 90 millimeter, of course you said it may be a little too early but my main question is probably with a little bit foundry model, from 90 nanometer technology do you think you

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need to change your foundry model a little bit. Maybe basically on the more basic material resource as well?

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

The foundry strategy, what are you thinking about? Is it from business model?

Pernaud Kumar de Sarnay - Daiwa Institute of Research - Analyst

I'm talking about the R&D point of view.

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

, yeah I think not just from 90 nanometer, I starting its about 0.13 micron. Your foundry technology strategy. I'm not sure we call it strategy. But that we have been spending more resources in R&D. And we are also, you're also right in saying we're spending money on more longer term research. We actually have an organization under our CTO, Dr. Chenming Hu who besides the research [inaudible] R&D,

Pernaud Kumar de Sarnay - Daiwa Institute of Research - Analyst

Is it safe to say in that case probably by year 2004 your R&D expenses might go above 10 percent of your revenue?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

No, I think that will be probably an over estimate.

Pernaud Kumar de Sarnay - Daiwa Institute of Research - Analyst

Thank you very much

Operator

Our next question comes from Leo Lee with ABN Amro. Please state your question

Leo Lee - ABN Amro - Analyst

My question is regarding the depreciation and amortization. Actually, in the presentation we had seen a depreciation &

amortization of about 16.1 billion. However, in a detailed note we see the depreciation in the first quarter only 13.3 billion. So what's the difference, why the amortization number go up to close to three billion? And are we booking under the cost of goods sold or are the other administration expense is my first question?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Can you explain again?

Leo Lee - ABN Amro - Analyst

Yes, in the presentation we are seeing that total depreciation and amortization is about 16.1 million.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I understand that. I just want you to repeat your last statements.

Leo Lee - ABN Amro - Analyst

I think that in page number 3 of the detailed note, we are talking about gross margin analysis. And actually in this chart, in the first chart we mention in the first quarter 2002 that depreciation number is only 13.3 billion. Just wondering why the amortization number go, the difference between 16.1 to 30.3. why did it go up to such a big number in the fourth quarter. And are we booking under the cost of goods sold or the other operating expenses

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We're booking under other operating expenses. They are under expenditures that are amortized

Leo Lee - ABN Amro - Analyst

I see. My second question is regarding the capex number, assuming that we have around 1.2 billion this year. Would that be like a front end loaded or the back end loaded and what's the percentage, can we give several numbers here?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Leo, did you just join the conference call, because we went over that at the beginning of the conference call?

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Leo Lee - ABN Amro - Analyst

Sorry about that. My last question would be regarding the wafer tech. Are we expecting it to break even by the end of this year?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Depends on the business conditions and the demand, certainly, I think they should be able to make money. It's really a function of utilization

Leo Lee - ABN Amro - Analyst

Okay. I see. Because I think I remember that last time company mentioned regarding the 0.13 will be around 20 percent, more than 20 percent by the end of this year. If that's indeed the case right now.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

That's still the scenario we see. Around 20 percent, that's still the scenario. But I think this is a dynamic world. It's subject to change.

Leo Lee - ABN Amro - Analyst

Thank you very much

Operator

Our next question comes from Carlin Carinder (ph) with Bear Stearns. Please state your question.

Ashesh Kumar - CSFB - Analyst

My question relates to the ASP decline of seven percent is that a typical ASP decline you see in the absence in a change in technology mix towards the higher end?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Well, it's not a typical for us to see that ASP change in the higher technology shipment, because in the past always the increase percentage of that technology, this is actually something new to us.

Ashesh Kumar - CSFB - Analyst

But if all things were constant would you normally see a seven percent decline in ASPs, quarter on quarter?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We don't normally see that, as you know well.

Ashesh Kumar - CSFB - Analyst

I guess my second question is, you obviously mentioned that your technology mix would improve in Q2. But if you're sort of comparing apples to apples, what would roughly sort of the ESP decline be in the seven percent range in Q2 also? Is this a trend which is developing in terms of just of more pricing pressure?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Well, we have indicated in the afternoon that we do expect the advanced technology percentage will go up and that overall ASP should go up. If we -- saying if we knowing that factor, I guess this is -- we can make some assumptions, but I would assume that the pricing level would not be as significant as what we have seen in the first quarter

Ashesh Kumar - CSFB - Analyst

Okay. Thank you.

Operator

Our next question comes from Ashesh Kumar with CSFB. Please go ahead

Ashesh Kumar - CSFB - Analyst

In your book-to-bill of point 125 in type A is that for the month of December or the month of January?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Actually nobody said 1.25 from the company side. It's all from the audience side that they are saying this. Then also we are not showing any pb (ph) ratio in the first quarter. So those are the fourth quarter graph.

Ashesh Kumar - CSFB - Analyst

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I'm sorry, but January is almost over. How does that look for January, just the trend not 1.25. Is it higher or lower compared to December?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I actually don't think 1.25 is the right number.

Ashesh Kumar - CSFB - Analyst

I was asking that irrespective of the number, as you said this has come more from us than the company. Is the book-to-bill showing a trend which is inching up or for January or December or is it flatish or is it trending down?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

It's not inching up. It is down.

Ashesh Kumar - CSFB - Analyst

Thank you very much.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

At this point we can only take one more question

Operator

Our final question comes from Daniel Haylor (ph) with Merrill Lynch. Please go ahead with your question

Daniel Haylor - Merrill Lynch - Analyst

Hi guys. What was the book-to-bill, Harvey? Because those charts, you eyeball it, looked like it was close to 1.25. What was the actual number?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

We had talked about in the news release they're all over one.

Daniel Haylor - Merrill Lynch - Analyst

Yes, but the chart that was flashed today was pretty close to 1.2, no?

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

Harvey, I think they're referring to one of the handouts. I think for the month of December it's book-to-bill ratio is quite a bit better than 1. I think the trend -- the trend for January, Harvey, is not as good as December. But I think still reasonably good.

Daniel Haylor - Merrill Lynch - Analyst

More than one. Then second on the IDM business you said that the IDM business actually declined in the fourth quarter. That was somewhat counter intuitive given some of the strength I guess you had seen in the wireless area from the IDM business. Was that decline in share more a function of some of the inventory that you were clearing out? And if so where do you see the IDM business going in the first quarter?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think January is pretty correctly and our yield has been improving especially along the .12 micron area. I think our, the ratio probably will improve, will go up somewhat in the first quarter

Daniel Haylor - Merrill Lynch - Analyst

I guess I'm particularly interested in seeing what you're seeing for the IDM outsourcing business for the first half. What can we kind of model in terms of growth rate? Should it be growing at a much faster rate or in a mildly faster rate than your overall business?

Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

Dan, I think anywhere between 30, 35 percent is pretty normal, will be a pretty good range for our business, from IDM customers. We have a very strong fabless customer base. They do grow pretty well also. But on the other hand, I think IDM outsource rate is -- I don't think it's slowing down. Probably not as fast as [inaudible]

Daniel Haylor - Merrill Lynch - Analyst

Right. And the richer mix nature of that is helping it grow, yes? That is, it's predominantly, the advanced technology portion that unlike previous downturns, is it a much higher ratio than --

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Dr. Rick Tsai - Taiwan Semiconductor - President and Chief Operating Officer

I think you're right as we're reaching the advanced technology.

Daniel Haylor - Merrill Lynch - Analyst

Just on the mask situation, given the huge number of discussions on mask costs and the second half of last year. Given that your volume on 0.13 is reaching some nice economies of scale, are you starting to see mask costs internally start to come down along a more normal cost down curve?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

You mean our mask costs, production costs?

Daniel Haylor - Merrill Lynch - Analyst

Correct.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

I think actually mask has one of the best cost structure in the industry for both scale of economy and really a very good, excellent operation management organization. And I'm quite sure our -- it applies to our 0.13 micron mass.

Daniel Haylor - Merrill Lynch - Analyst

I guess where I'm coming from is I've heard mixed points on 0.13 mask that we've been hearing some reports that the actual merchant market costs have been coming down of late. And I was just wondering if, did you agree with that? And are you seeing, are you helping people move down that curve as well?

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

It's a function of supply and demand. We're certainly, I think one sure thing is we do not do our mask business. I mean we do not make our mass to be the bottleneck of the wafer business.

Daniel Haylor - Merrill Lynch - Analyst

Right. Given that you've got the leverage of amortizing the costs across --

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Yeah, we have flexibility. But we also have a very efficient operation compared to our other competitors [inaudible] I believe.

Daniel Haylor - Merrill Lynch - Analyst

Thanks, that's it.

Harvey Chang - Taiwan Semiconductor - Chief Financial Officer

Okay. Thanks. I think we have a pretty good 80 minute session and I want to thank you all who joined us this morning and this evening. And we'll see you next time.

Operator

Before we conclude, TSMC's fourth quarter 2002 earnings revenues conference call today, please be advised that this replay of the conference call will only be accessible through TSMC's web site at www.tsmc.com. Thank you all.

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