Bentley Agreement to Acquire Power Line Systems Transcript

Greg Bentley: Hello and thank you for your interest. My purpose is to explain Bentley Systems' just-announced agreement to acquire Power Line Systems. On the one hand, that's completely consistent with Bentley Systems' mission of advancing infrastructure. And at the same time, it fills a significant gap to complete our reach in what I call grid integration, which I'll explain.

But first, to start with our mission. Of course, it's infrastructure that together supports and enables our economy and our environment. That's the work of infrastructure engineers, which would include power transmission engineers. And, of course, our role is to enable them with infrastructure engineering software, intended now to include the Power Line Systems software.

And our sweet spot at Bentley Systems—if you like—among all of infrastructure, is that particular sector we call public works and utilities. And in fact, this opportunity with Power Line Systems will propel us to the forefront of what is one of the most robust and potentially rewarding engineering challenges of today and for the long term, which is to improve the capacity and quality and resilience of the world's power transmission infrastructure.

And of course, it's comprehensiveness that is Bentley Systems differentiating competitive advantage over disciplines and sectors and lifecycle and geography. What I'm going to explain is that Power Line Systems will enable us to increase our growth rate in five different ways, including all of these dimensions of comprehensiveness, starting with how, in completing our reach for grid integration, we fill a rare gap now in that comprehensiveness.

So, first of all, to introduce Power Line Systems, the company was formed the same year as Bentley Systems in 1984. But whereas Bentley Systems has developed a platform and then an extensive portfolio of applications across infrastructure, Power Line Systems, rather, has grown intensively in the same problem set where it set out: in power transmission engineering.

It was founded by Professor Elaine Pierro at the University of Wisconsin, who brought a finite element analysis approach to solving the problem of structural analysis, combining the towers for electric transmission with the problem of the engineering at the same time of the structural aspects of the conductors and lines, which connect the towers. And that's a significantly challenging problem that, for instance, in Bentley Systems, although we have excellent general structural analysis software, that particular combination of problems we haven't specialized in or focused on during this same period of time.

On the other hand, Power Line Systems has had an inventive and resourceful group of software engineers and transmission line engineers working together to, each year, increasingly improve the scope of the software for this purpose. And Eric Jacobson—the chief technology officer—and Otto Lynch—since 2018 the chief executive officer, and having been the chief operating

officer from earlier—have led this team to continually improve the quality and the perfection of the software to meet the varied requirements of power transmission engineers.

Power Line Systems was acquired by TA Associates in 2018 and, since then, has modernized its commercial model and is now a pure subscription software company. But let's look at the substantive area of their fundamental product: PLS-CADD, which started back when we set computer-aided design and even drafting. But such is the challenge of the combination of the transmission structure and the lines that it was approached as a 3D engineering problem from nearly the outset.

So, BIM and digital twins and so forth are natural extensions of that in this space. The modeling includes the sag and the tension and the movement of the conductors, which has so much to do with their performance, but also vulnerabilities, for instance to vegetation and other encumbrances.

Such is the importance of power transmission in the world, everything we do depends on it, that there are rigorous technical standards to which Power Line Systems has contributed over time. And the software complies and goes beyond those requirements for most of the world.

The provision of power transmission corridor starts with terrain modeling. And the foundations and geo-engineering, as well of the power transmission structures, which themselves, as I explained, are a particular type of challenge solved by a particular type of finite element analysis. And the PLS-CADD product as well automates the drawing production and, finally, has a big competitive advantage in the world, in that the equipment and the industrialization of what it takes to deliver projects for power transmission include libraries of digital components, if you like, particular to PLS-CADD provided by the manufacturers of those and improving the efficiency and quality of the whole process.

So, Power Line Systems' customer mix, shown here, rather corresponds to our pattern and profile at Bentley Systems. In the darkest blue are the engineering consulting firms to whom much of this design work is outsourced. And then the lighter blue and other colors are various categories of owner and supply chain providers in power transmission engineering.

But when we look at the distribution of the customer base geographically for Power Line Systems, it doesn't happen to look as evenly distributed in the world as is ours at Bentley Systems, if you note the concentration of almost two thirds of the business in North America. But representation sufficiently otherwise throughout the world to substantiate the compliance and validity of the PLS products for standards and requirements everywhere.

So, let's put the opportunity for grid integration in context here of our world. So, as I say, Power Line Systems focuses on the transmission of electricity from the central generating sources. It's the light blue structures you see here that are the high-voltage overhead lines, either by way of towers or poles as you see the power transmission grid. Bentley Systems, on the other hand, our footprint in the electrical web is on the distribution side, the other side of the substations, which connect to transmission lines. But the substations tend also to be owned by the organizations, which are distributing power at lower voltage on the downstream side of the substation to end users and all of us.

And our products for this purpose are OpenUtilities Designer for network provisioning, OpenUtilities Substation, and, acquired earlier this year, the SPIDA analysis products for the engineering of distribution poles and the low-voltage wires that connect them and connect throughout the distribution network. So, together, an integrated grid, the problem of power transmission and distribution, in fact requires, an integrated grid. But I want to explain first that the Power Line Systems business is subject to expanding considerably for other reasons than merely grid integration.

And here to stand for this premise, at Bentley Systems, our *Going Digital* Awards, part of our annual *Year in Infrastructure* conference, the judging is underway now among hundreds of projects nominated by our users. Independent juries have narrowed the awards down to 56 finalists in 19 categories. And the point is that 13% of the finalists are projects involving renewable power generation sources.

And I think that may be representative of the cross-section of focus in infrastructure engineering in the world now on renewable power generation. Renewable power generation needs to be connected. It's in new places with new resources: offshore with wind, onshore with wind, solar, and so forth. It needs to be connected up to the power transmission grid to find its way to end users of electricity and the electrification, for all of us as end users, for instance, for the increased loads for chargers for our electric vehicles and so forth on the other end. So, both the renewables increase in sources of electricity on one side of the grid, the transmission side of the grid, and then feeding the distribution to a more electrified world on the distribution side are tremendous forces, requiring new investment and extension of the power transmission grid.

So, a way of looking at that is this estimate that shows that, in the United States, for instance, our current transmission grid spans 600,000 miles. But one view of the grid required in 2050 for a net-zero carbon emissions—again, that affects both the generation side and the usage side—would be a grid requiring six times as much reach. And what an opportunity to help a limited stock of power transmission engineers to meet that worthwhile but exciting challenge. So, that's

one source of growth is the secular requirement for a more extensive and intensive power transmission grid.

I'd like to talk about four other directions of growth acceleration that an integrated grid approach will reach now in Bentley Systems. And let us start with our geographic direction dimension of comprehensiveness. So, those 600,000 miles of transmission lines in the U.S. are among 4.7 million kilometers of transmission lines across the world. So, the requirements in the U.S. are only a fraction of the requirements in the world.

This is an estimate of the transmission and distribution investment by region in the world, estimating that the U.S. is only 18%. And remember that the U.S. is two thirds of Power Line Systems' business today. And you see the magnitude of geographic opportunity increased with Bentley Systems' comprehensiveness and footprint, as we are evenly distributed, distributed closer in this proportion to the opportunity in the world at large.

So, it happens back in the *Going Digital* Awards, in this year's competition in the utilities and communications category, for instance, here are the finalists. And by way of geographic comprehensiveness, this is a substation in Malaysia, a substation project in Malaysia, a transmission project in London. These are tunnels, 3 meters in diameter up to 60 meters below the ground. So that's a transmission problem involving underground transmission in this case. That's in the U.K. And then, this third finalist is a photovoltaic project in China, a very interesting one that used a very large playbook of our software, including our OpenUtilities Substation software, which has been rather successful in China. So, there's nothing about China that isn't reachable and where we can't meet market opportunities, including in China: the place in the world with perhaps the greatest investment and opportunity in power transmission. But this is an example of generation that's very interesting. It utilizes a barren mountainside and uses our software to engineer catchment for photovoltaic power there.

So, that's geographic expansion opportunity for Power Line Systems. Let's talk about the whole infrastructure lifecycle of an integrated grid. And of course, that opportunity for Bentley Systems is to improve and increase the value of what's created with our modeling and simulation applications. Power Line Systems applications are modeling and simulation applications. But rather than be used only once in the project deliverable of, for instance, a transmission line and towers, the lifecycle digital twin opportunity—going beyond even project delivery—is to continue to use modeling and simulation deliverables during the asset performance lifecycle, the larger and longer and greater economic opportunity.

We make that possible with our digital twin cloud services, for which I'll provide examples. But in going from a design software to a lifecycle software opportunity, may I use the example of our

OpenTower solution, which primarily is for communication towers, as in this example. And we were invited to work on this problem and, over the past several years, introduce this new product specializing in— again, this is not a transmission tower. This doesn't have connected power lines. But our OpenTower solution involves and entails continuing to re-simulate the structural integrity and resilience of this communication tower as new equipment is added. And it's required that, as new equipment is added to a communication tower, that simulation be repeated, along with all of these other lifecycle requirements.

But the greater opportunity was this year to add our OpenTower iQ capability that turns this into a cloud service, taking advantage, but expanding, the reach of OpenTower. We announced earlier this year OpenTower iQ, which brings together—into a communication tower digital twin—the capturing an existing communication tower through reality modeling and machine learning to recognize and take inventory of the equipment on the tower, and then to improve its lifecycle.

So, here's the example, this reality modeling process in this. Our software works from overlapping images, for instance, captured by that UAV, to resolve those images into an as-operated 3D model, as you see here. And as you see here, it can be as accurate in millimeters even, as is the number of overlapping photographs.

And then, machine learning can be applied to this, for instance, to recognize problems in corrosion or perhaps, here, deterioration. So that the engineering, the ET, the models, and simulations, for instance, in OpenTower can now be applied to the as-operated conditions of the communication towers, captured in reality modeling in the process we just saw, and then supplemented by infrastructure IoT sensors.

And then our—in terms of—that's ET then, and OT—IT is our iTwin platform, which maintains a digital chronology, both on the physical and the engineering side, managing the changes so that, if you like, a 4D time slider can maintain the history and predictive performance of the communication tower digital twin, supporting analytics to improve its throughput over time.

So, since earlier in the year, announcing the availability of OpenTower iQ, I mentioned in our third quarter operating results presentation that we're already generating, in this past quarter, multiple millions of dollars of ARR new business growth for communication tower digital twins.

And now the opportunity—it's very interesting to consider—is for the world's existing transmission towers to go from the PLS modeling and simulation to this same opportunity for digital twins of transmission towers, many of which are aged and have deteriorated and are subject, for instance, to vegetation encroachment and other vulnerabilities having to do with climate, and seismic, and so forth, to consider this subscription opportunity per tower per year, as we do with communication towers, extending as well to transmission towers. So that's the lifecycle opportunity to accelerate growth from our Power Line Systems intended acquisition.

Let's talk about multiple disciplines and grid integration in that respect. And here, we mean integrating the transmission engineering grid with the distribution engineering. And the distribution grid is much more extensive and numerous. If you look here at the number of structures, the number of substations, and so forth, it is a tremendously broad opportunity everywhere. And to quantify that, if you consider again, for instance, in the U.S., the 600,000 miles of transmission lines, well, there are almost 10 times as many miles of distribution lines. And the same relationship pertains in the world at large.

So, can we apply the sophistication of modeling and simulation in power transmission, and the digital twin opportunity there, to power distribution? Well, power distribution is approached differently at this time in the world.

While transmission engineering is always done by professional engineers in a sophisticated approach, often with the PLS products, the fact is that distribution engineering has many different points of departure and rather an assortment of approaches in the utility organizations of the world. And this is a picture of our own history at Bentley Systems, if you like, starting with products that included 2D deliverables, 2 and 1/2 D GIS, 3D BIM, and now we say 4D digital twins, as I've shown, putting it all together.

All of the approaches continue to be used together. The 4D digital twin approach has really not yet been applied in distribution, but its feasibility has obviously been proven in the case of transmission. The fact is that the distribution opportunity lies ahead. And what may, I think, catalyze and accelerate it is applying this same reality modeling approach, which, you remember from UAVs, captured the as-operated 3D model of the transmission tower. We can now imagine—and there are drones, UAVs, surveying distribution lines as well, and the precision available, and would include recognizing the conductors, and the pole characteristics, and so forth.

So, once you would have, and could have, as you don't now have, as-operated 3D models for the whole distribution network, can now—the engineering sophistication, for instance, of the PLS solution set in terms of the structural, and terrain, and other analyses—be applied to the now-captured 3D reality and, by way of digital twins, introduce the opportunity for infrastructure digital twins on the distribution network. That would be an order of magnitude larger, potential market opportunity, we believe, from great integration.

Now, if we talk about comprehensiveness across sectors, we mean in this case, the communication network sector, and there has always been joint use between power distribution infrastructure and communications infrastructure. Most distribution poles, or many, have both electric transmission and wire lines for dial tone, for communications. But the picture that joint use has in the future— when devices to power 5G antennas and facilities look like this and need to be placed close to cellular uses in the world, then the communication network facilities don't only look like these existing towers. They can be, and will need to be, everywhere—on rooftops,

on other structures, and increasingly on power distribution poles. That grid integration opportunity is very immediate and important now as well.

So, if you consider here, again, the expanded aspects of the transmission and distribution grid, but now the communication grid—and this is our OpenComms software—is what provisions this type of grid. Being able to have grid integration, including distribution digital twins will be very relevant for this grid integration opportunity as well.

And the resilience when it includes not only power, but communications, of the threats to this infrastructure. For instance, from wildfires and weather extremes and events and vegetation encroachment (the source, by the way, of wildfires in the case of electrical transmission), and the deterioration of older structures—generally suggests some of the directions of possible new applications for grid infrastructure digital twins.

And I'd like to go through three examples using our existing infrastructure and grid digital twin services. So first, an example here. We happened to be, at Bentley Systems, the proprietors of the best software for 4D models, if you like, of vegetation, including trees that grow. This shows the catalog being added to the NVIDIA Omniverse service so that 4D visualization can include the growth of vegetation. And you can imagine how, in the Omniverse, that could improve and increase the value of a grid digital twin.

But a grid digital twin starts with the existing data that a utility has. We have a digital twin quality service, which, as here in this example, shows problems and inconsistencies in the electrical model that the existing books of record often for distribution—that could be a GIS system, which captures only a notional representation of the distribution assets and not their engineering qualities and characteristics—may or may not correspond in reality. What so often happens in distribution is that the utility will roll a truck to a location, as here. The crew will discover that the instructions they've been given, the drawings they've been given, the locations they've been given, the materials they've given don't correspond to the reality at that site. And they're unable to perform the function, which someone has requested and is waiting for.

The network provisioning system provided an incorrect work order that didn't correspond to the reality. What they do is take the truck back, report in, and say that there needs to be a new survey of that site. And eventually, a new survey occurs because, by the way, those in the field don't have any way of capturing the different conditions.

So, all of this is something an infrastructure digital twin will enable the improvement in quality, first of all, through machine learning—what looks like it's something wrong or incorrect or

inconsistent in the engineering models and then being able to capture, in the field, the actual conditions and update the evergreen live 4D digital twin.

And what might you use, then, that digital twin for? Let's go to the example in Distributed Energy Resources, DER. So, this would be where, on the grid, there's a request, for instance, to connect up storage or renewable source—photovoltaic, for instance—somewhere on the edge of the grid. And the power company must simulate whether that's safe, does the capacity exist.

So here, from the digital twin, in real time in the provisioning process, the Siemens SINCAL software, which is used and is the best for modeling electricity, which flows in two directions across the grid—in real time, that proposed extension to the distributed energy generation in the grid would be simulated and, as in this case, approved to enable that renewables improvement to our energy adaptation.

And here's an example where the digital twin is of an existing brownfield substation, if you like. But in its asset performance modeling, a new transformer, I think this is, is proposed and can be modeled and captured—industrialized, if you like—and its installation simulated and its impact on the engineering models assessed and planned for. And then, 4D construction modeling could ensue for this example of putting that all together in grid integration.

So, speaking of substations, Pacific Gas and Electric, PG&E, is often referenced as having particular challenges, especially in transmission. But they've been actively applying reality modeling for substation asset performance and construction sequencing in substations; this year, a nominee in—at the enterprise level.

But in—during this summer, it was announced that PG&E will put 10,000 miles of its transmission lines from overhead to be buried underground. And even then—although that won't be an immediate opportunity for Power Line Systems software, which has to do with modeling of the overhead transmission resources—it happens that, for Bentley Systems, subsurface utilities are an excellent opportunity for us. We are, we think, the leaders in subsurface utility design and analysis and modeling. And subsurface digital twins are of the essence in infrastructure resilience.

So, speaking of resilience, again, we all talk about ESG—we like to say, in Bentley Systems, ES(D)G—to empower the UN Sustainable Development Goals, and grid integration is of the essence in so many sustainable development goals that together, grid adaptation, if you like, is a world consensus priority. As witness the climate summit just ended, where commitment from across the world to, especially—the energy grid improvements needed for decarbonization are immediate priorities and opportunities.

If you like, our Power Line Systems acquisition is the ultimate ES(D)G investment at Bentley Systems to take advantage of the ultimate opportunity now, and ultimate in terms of expenditure. This is Goldman Sachs' estimate that the green CAPEX—capital expenditures, if you like, to meet these consensus goals—will reach $6 trillion per year. And if we look at, in particular, almost half of that is to do with the opportunity I'm describing as grid integration, including the portion for upgrading the communications grid as well—and, of course, very important to us at Bentley Systems.

In the United States, we have not only needs, but now new funding that's law in our Infrastructure Investment and Jobs Act. And the portion of the $550 billion in incremental investment there that's earmarked directly for the electric grid is on the order of $65 billion, with an additional amount almost comparable for communications and broadband improvements in the grid integration opportunity.

Moreover, on transmission especially, the plan includes a new grid deployment authority to streamline the approvals and get this opportunity and this funding flowing, requiring transmission engineers accomplish more than ever. But there's a limited number of transmission engineers. We can't produce new ones very quickly. They'll be very much motivated and able to improve their productivity and work quality as a necessity through Power Line Systems.

So, that's a tremendous immediate opportunity, first of all, as I said, which would occur from this increase in power transmission engineering activity generally for the reasons in the world of renewables and electrification, but then added to that, how we at Bentley Systems can accelerate that growth and it can accelerate our growth in the geographic and lifecycle and discipline and sector integration of the grid, respectively. Thank you.

David Hollister: Thanks, Greg. I have just a few points to add about the transaction. As we've indicated, the purchase price is approximately $700 million, but the deal structure enables us a tax-deductible step-up in basis, which we've valued at $90 million. The value is consistent with recent relevant comparable benchmarks and in line with valuation multiples of peers in our industry.

We retain the option to close the transaction fully with cash, which we can accommodate on our existing revolving credit facility. Or we can close the transaction with a mix of cash and up to 50% of the consideration in shares—again, at our option, determined at closing. We're evaluating each of these options, along with other financing alternatives.

The deal is expected to close by the end of this year and, of course, is subject to customary closing conditions and regulatory approvals. Assuming we do close by the end of this year, we

expect PLS to add approximately $30 million of subscription revenue to our fiscal year 2022 results. And that it will be slightly accretive to our normal business performance growth rates for revenues and ARR.

Of particular note, I share that PLS has adjusted EBITDA margins that are more than twice that of Bentley Systems. Net of the $90 million tax value in this deal, the purchase price multiple on EBITDA for PLS is slightly more favorable for us relative to the multiples on our recent Seequent acquisition, which we could attribute to the higher top-line growth rate of Seequent. As we've shared, Seequent continues to perform very well for us.

Additive to this will be the synergies we'll get to work in harvesting out of the upsell and cross-sell opportunities with our existing adjacent activities and by applying the multiplier effect of introducing our globally distributed sales force and corresponding ambitious marketing. Thanks for your interest in our PLS acquisition. And, of course, thanks for your interest in Bentley Systems.