
ODIS, INC.
INTELLECTUAL PROPERTY
APPRAISAL SERVICES
REPORT

VERSION 1.2

Redacted Version

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VALUATION OVERVIEW

Purpose and Proper Use of This Valuation Report

This document presents a number of approaches for determining a valuation for an intellectual property portfolio created and owned or co-owned by ODIS, Inc. (ODIS). Pellegrino & Associates, LLC (P&A) evaluated the advantages and disadvantages of each valuation approach and then chose the appropriate one for the final valuation. We then described the application of the chosen valuation approach in detail, presented opinions and facts to provide the supporting data for the final value determination, and rendered the final value opinion.

VALUATION PURPOSE

ODIS is a Connecticut-headquartered wholly owned subsidiary of OPEL Solar, Inc. (OPEL), a publicly traded corporation that develops solar energy generation technologies. ODIS has the exclusive rights to an intellectual property portfolio developed by Dr. Geoff Taylor at the University of Connecticut.¹ The intellectual property portfolio merges optoelectronics and traditional semiconductor manufacturing processes into a revolutionary semiconductor process. This process enables the dense packing of electrically and optically coupled circuits into monolithic packages. Known as the Planar Opto Electronic Technology (POET), POET represents what some might consider the Holy Grail in new semiconductor designs, bypassing many of the physical limits of existing semiconductor technologies at the 0.09-micron fabrication level.

When deployed fully, POET may help restructure the existing semiconductor industry. Key benefits of the POET platform include faster semiconductor operating frequencies (e.g., 100GHz), lower heat losses, greater reliability, and total system cost reductions (e.g., remove many input/output driver circuits). ODIS has working implementations of all component parts, and a third party has validated that the component parts work as ODIS theorizes. ODIS expects to have a fully integrated chip operable within months. Products that incorporate POET have lower power consumption, lower weight, and greater functional potential. ODIS has a number of U.S. and international patents pending to protect its technology platform. ODIS seeks to monetize the POET through license agreements with semiconductor companies and defense contractors.

ODIS seeks to understand the value of the POET platform for possible transactions among suitors for various fields of use. In order to do so, ODIS needs to understand the value of its intellectual property in order to ensure that any arrangement it closes will be equitable. ODIS hired P&A to assist it in determining the value of its intellectual property portfolio. As the appraisers from P&A who performed this assignment, we considered appraisal methods to determine the value of the intellectual property.

Appraised Property

The property subject to appraisal includes the following items (hereinafter referred to as “Subject Property”):

¹ Dr. Taylor is in fact also the Chief Technology Officer for ODIS.

- Economic income attributable to ODIS' POET intellectual property portfolio as it applies to the general computer market, which consists primarily of server computers, desktop computers, and laptop computers.
- Economic income attributable to ODIS' POET intellectual property portfolio as it applies to the defense contractor market.²
- Economic income attributable to ODIS' POET intellectual property portfolio as it applies to the smartphone market.

We did not consider any other assets in this valuation report.³

Appraisal Type

We have prepared our opinions and conclusions in this valuation report using guidelines specified in the self-contained appraisal report format.

Appraisal Scope

The scope of this document is to present a compilation of the methods used to determine the valuation of the Subject Property and then a final value determination. We relied on the documents and discussions listed in the References section of this report to assist us in determining value.

We did not value any other assets as part of this engagement. We did not conduct a fairness opinion for ODIS or OPEL.

ODIS has not restricted our scope of review in any material way. We could not verify certain claims by ODIS representatives directly (e.g., the fees defense contractors may pay ODIS for a license). However, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that our scope provided us with the ability to generate credible valuation results.

Definition of Appropriate Value Standard

For the purposes of this assignment, we used the fair market value standard of value as defined in Revenue Ruling 59-60 (59-60). Fair market value is the amount at which property would change hands between a hypothetical willing buyer and a hypothetical willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts.⁴ Court decisions frequently assume the hypothetical buyer and seller are also willing and able to trade the property and have sufficient information as to the property and the market for such property.⁵



POET addresses a broad spectrum of applications (e.g., communications lasers, infrared sensors, pixel arrays, etc.) that may extend well beyond the basic licensing scenarios that we modeled.

⁴ [10], p. 2.

⁵ The original intent for 59-60 was for the valuation of stocks of closely held corporations. Several valuation approaches described within 59-60 pertain specifically to this end. However, the assets under consideration are not shares of a closely held corporation. Instead, these assets represent a collection of intellectual properties that have attributes different from closely held corporations. While there are some similarities (e.g., limited market, low trading activity), there are circumstances that dictate that certain approaches described in 59-60 do not apply to this

Fair market value, as defined, does not necessarily reflect the actual price that ODIS could realize from a true sale of the Subject Property in the real market. Rather, the value standard reflects the notional value of the Subject Property in an assumed market. This assumed market considers the historic and prospective value of the Subject Property in light of the business risk associated with the Subject Property. The notional value does not include possible synergistic benefits or economies of scale that might accrue to the potential purchaser not already captured in this report.

In the real market, the Subject Property could generate as many prices as there are buyers in the market, with each buyer having the ability to pay its own specific price based on its own specific set of circumstances. In the end, the final price will be the result of a set of negotiations between buyers and sellers that we could not ascertain or forecast for the purpose of this engagement. However, we could test our value conclusions to ensure that there is a reasonable economic basis for our value opinions (e.g., the opinion does not rely on market growth rates or risk rates that empirically are nonsensical). We describe the tests that we used in an article published in *Valuation Strategies Magazine*.⁶

We used the efficient market hypothesis (EMH), cross-referenced with the definition of fair market value in 59-60, to aid our reasonableness test analysis for the Subject Property. The EMH is an investment theory that reflects the diffusion of information and the integration of it in the value of assets. The EMH provides an important context for understanding the definition of fair market value, particularly with respect to available information and the reflection of such information in value.

The EMH asserts that markets are efficient and rational in the processing of information and that the market reflects such efficiencies in the value of a given asset. Empirically, this is an easy concept to test, whether it is a commercial building or a share of stock in a company. If the market finds a commercial property to have toxic waste, the market will adjust the value of that property to account for the liabilities associated with the cleanup, future lawsuits, and other factors. If a public company misses or exceeds earnings targets, then the market reflects such information in the company's share price. As the market reflects information in the price of the asset, there exists a fundamental belief in the EMH that the values are unbiased, hence, objective. Of course, the magnitude of the value change is of significant importance, as it drives the ultimate price and market value of the company.

There are varying degrees of market efficiency, which reflect the dissemination of information by the public. The EMH classifies the varying degrees as follows:

- **Weak-form efficient:** The historical prices of securities represent all information with respect to value and no one can earn excess returns in the market (i.e., "beat the market").
- **Semi-strong-form efficient:** The market reflects all information with respect to value within a timely fashion (nearly instant) and no one can earn excess returns in the market.
- **Strong-form efficient:** The market reflects all information both public and private with respect to value and no one can earn excess returns in the market.

assignment (e.g., inspection of book value of the stock, as no reasonable book value exists). Our exclusion of such inapplicable methods is deliberate and does not represent an error of omission for this assignment.

⁶ [13], pp. 25-27.

One may argue that 59-60 implies that the market is strong-form efficient, as valuation analysts must render a value conclusion with respect to a hypothetical buyer and a hypothetical seller, both having access to relevant information, with equity to both. Such a scenario only exists in a strong-form efficient market.⁷ Deviations from the strong-form efficient market would not reflect relevant information or create equity, thus violating the fair market value standard definition in 59-60.

While there has been much empirical analysis both for and against the EMH, what is important is that 59-60 implies the concept of the EMH in its definition of fair market value:⁸

As a generalization, the prices of stocks which are traded in volume in a free and active market by informed persons best reflect the consensus of the investing public as to what the future holds for the corporations and industries represented.

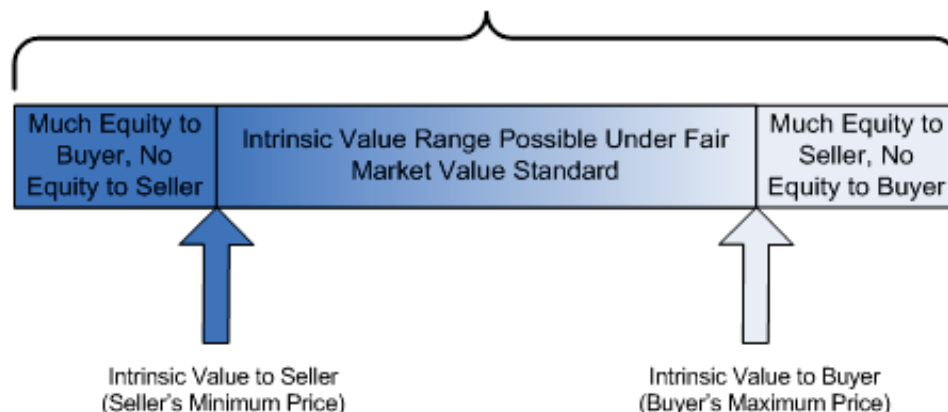
Because of the implications of 59-60 and the reliance on strong-form efficiency of the EMH, a natural conclusion is that hypothetical rational buyers and sellers would only close a transaction when there is equity to both and access to all relevant information. Merely looking at share prices (or share-price-related multiples, such as revenue, earnings, or cash flow multiples) as a value proxy for other companies does not provide such relevant information (particularly to the buyer). Therefore, it is practically impossible to make a determination as to whether equity exists. This analysis naturally gets more complicated if there is a stock swap as opposed to a cash purchase for the company, as selling shareholders assume the risk of the buyer, for which they may have little working knowledge. Further, it gets more complicated still when dealing with collections of assets that have no reasonable comparable in the market, such as is the case with intellectual property portfolios.

Implicit in the definition of buyer and seller equity is that both parties are satisfied with the outcome at the closing of a transaction, considering the relevant economic environment (i.e., the deal meets or exceeds expected returns). Yet one cannot begin to prove equity without performing the due diligence associated with determining the intrinsic value of the asset. The buyer cannot prove buyer's equity until performing a returns-based analysis, which one does by calculating the intrinsic value of the asset to the buyer. The seller cannot prove the seller's equity until performing a returns-based analysis, which one does by calculating the intrinsic value of the asset to the seller. The following is a continuum that demonstrates the equity allocation under the fair market value standard:

⁷ If the market were weak-form efficient, then buyers would never pay for acquisitions at prices higher than control values for companies, as there would be no financial equity to the buyer.

⁸ [10], p. 2.

Fair Market Value Continuum



Therefore, if both the buyer and seller perform an intrinsic value analysis to test equity, then the natural result would be something within the range of the seller's intrinsic value, which sets the minimum or "floor" value for the transaction, and the buyer's intrinsic value, which sets the maximum or "ceiling" value for the transaction. Any value within that range will produce equity for both parties and meets the definition of fair market value. Any value outside of this range will not create equity and fails the definition of fair market value.

We did not know who the hypothetical buyer would be for the Subject Property. However, it is reasonable that a hypothetical buyer would seek a reasonable financial return for the Subject Property at or in excess of its cost of capital based on a sound and probable forecast of future economic activity. We focused our analysis on this approach to determine the fair market value of the Subject Property and used the results for our value opinion.

Definition of Appropriate Value Premise

The value premise that we used in this report is *value in exchange*, which is inherent in the fair market value standard. Value in exchange typically refers to the amount of other goods and services for which a unit of a specific good may exchange in a market. The money price often is one measure of value in an exchange.

Appropriate Value Country Currency

All value numbers we have presented in this report reflect a U.S. dollar denomination. As the target markets that we studied would pay in U.S. dollars, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that any value anomalies due to currency conversion will have a *de minimus* value impact.

Intended Use

The intended use of the opinions and conclusions in this valuation report is to provide a value basis that ODIS may use for its internal management purposes. The intended use expressly excludes any other purpose.

We based our opinions and conclusions presented in this valuation report upon a reasonable degree of probability within the valuation profession; however, the intended users understand that they cannot interpret our opinions and conclusions as a guarantee of value.

Intended User

We have performed this appraisal specifically for OPEL Solar, Inc., whose primary address is Three Corporate Drive, Suite 204, Shelton, CT 06484. The intended users of this valuation report are OPEL's executive management.

Technical Knowledge Guidance

This document contains highly technical material. While we expressed the resulting valuation in simple terms, a complete understanding of the valuation detail is easiest with a solid understanding of the following conceptual areas:

- Valuation theory and methods
- Appraisal development and reporting standards

Effective Date

The effective date of the opinions and conclusions in this report is **December 1, 2010**. The effective date of this written report is **February 25, 2011**.

SUBJECT PROPERTY OVERVIEW

[REDACTED]

Semiconductor Materials

[REDACTED]



[Redacted]

[Redacted]

[Redacted]

Planar Opto Electronic Technology (POET)

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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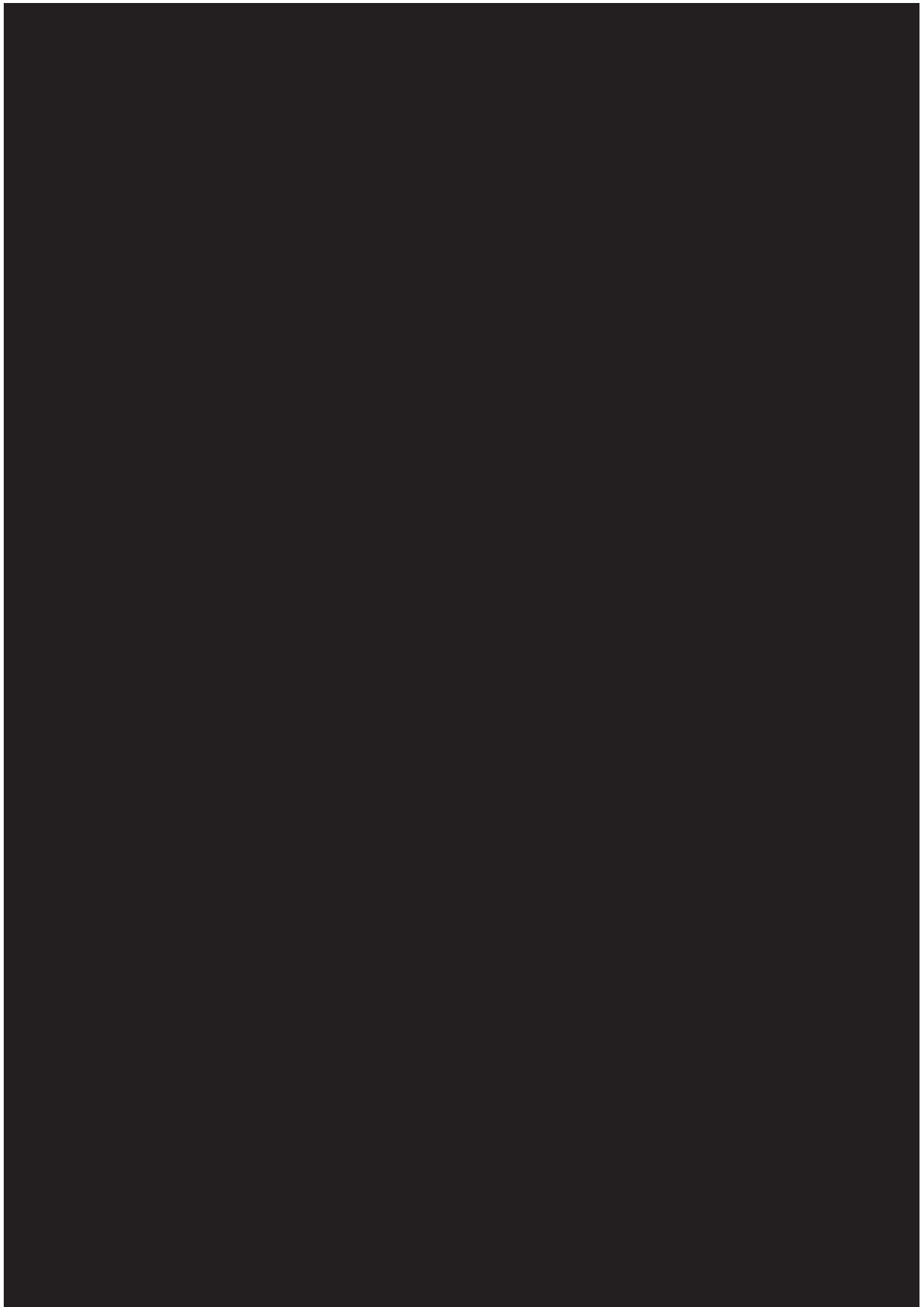
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POET Patents

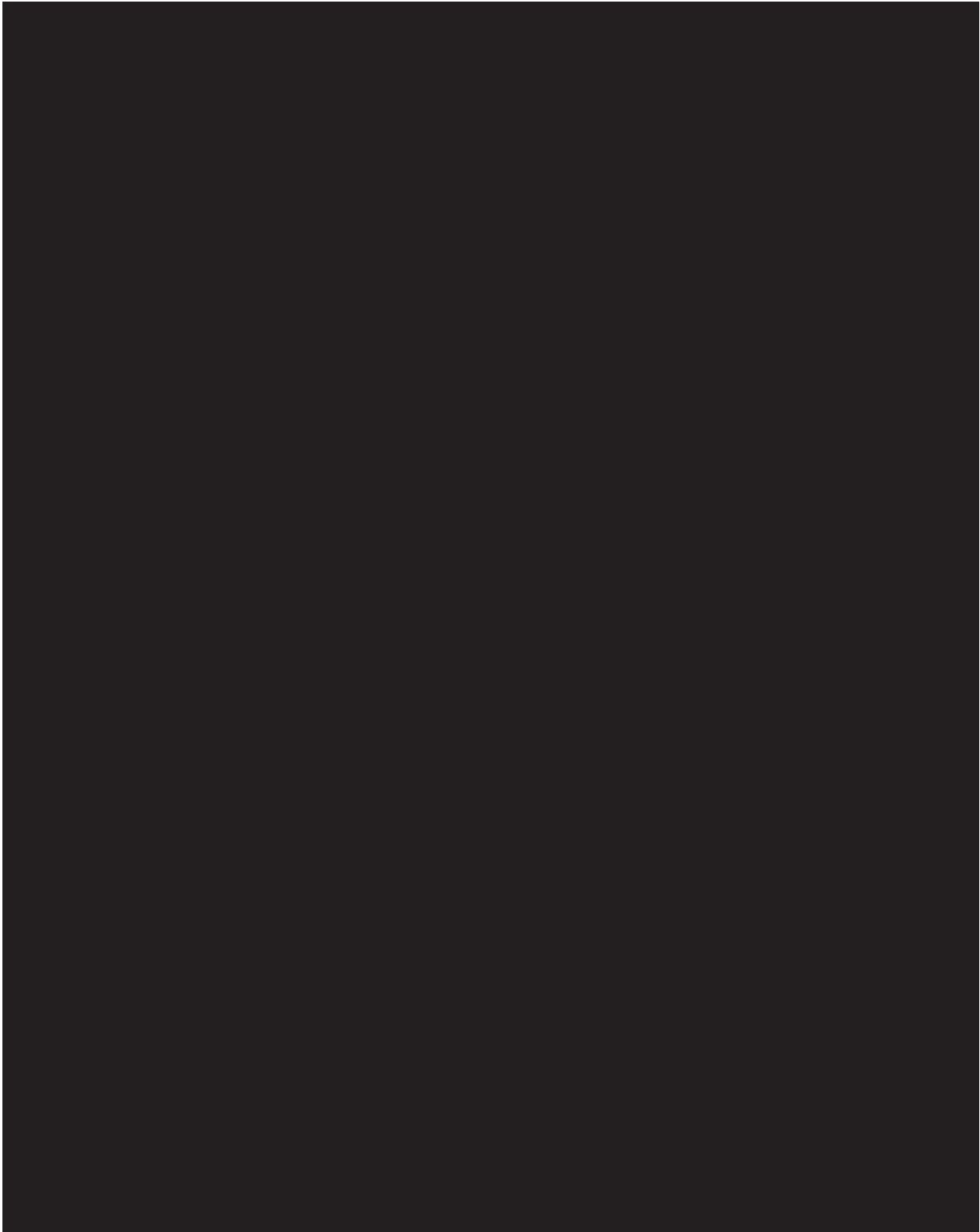
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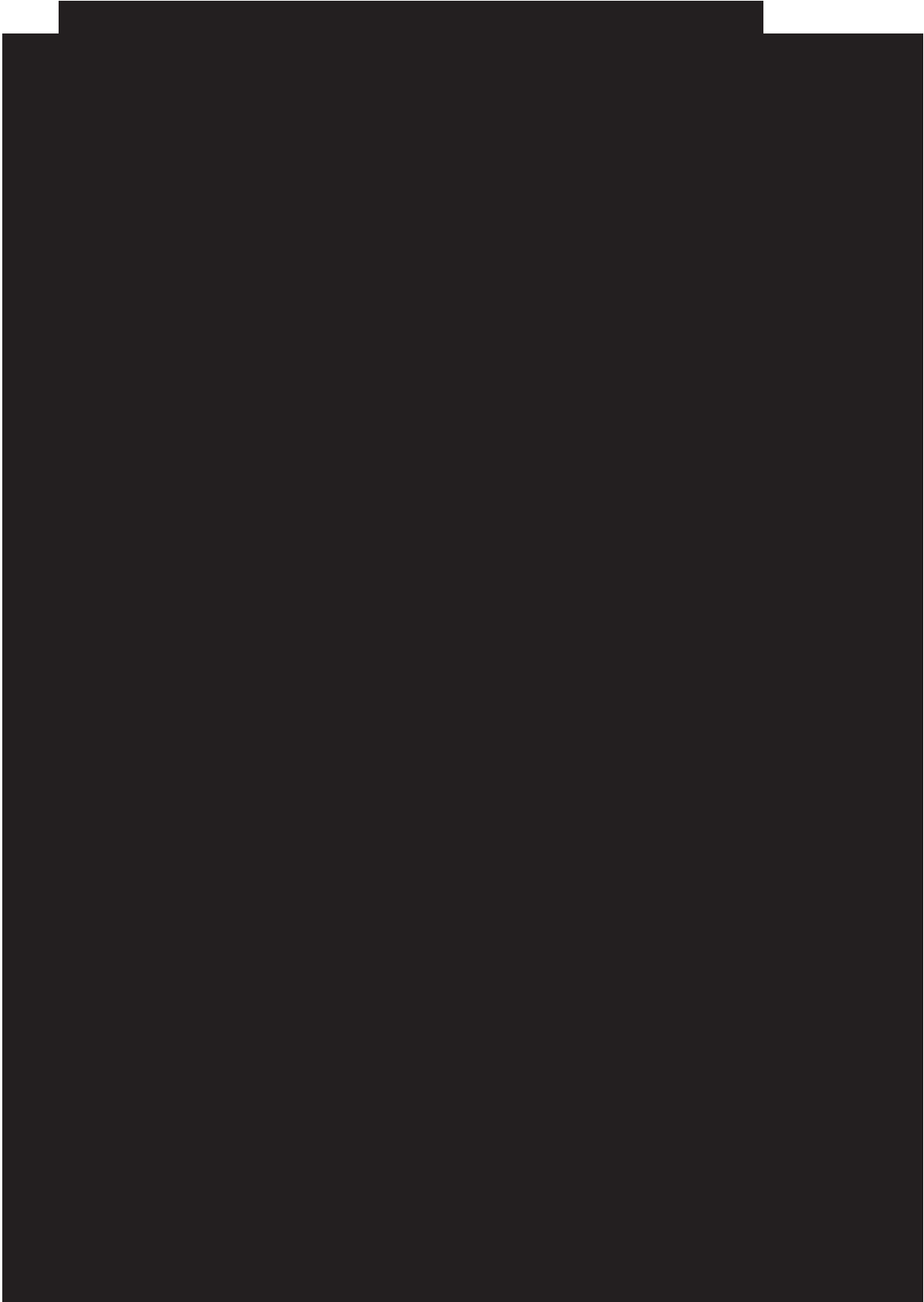
15 [Redacted text]







POET Patent Summary





POET Patent Status



17
18



Patents Not Yet Filed

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Development Projects

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19 [Redacted footnote text]

- [Redacted]
- [Redacted]
- [Redacted]

Subject Property Consolidated Value

[Redacted]

[Redacted]

Current Ownership Rights

[Redacted]

[Redacted]

Ownership Transfer Offers



APPROACHES TO DETERMINING VALUE

Three accepted approaches to valuing the Subject Property exist: the market approach (or sales comparison approach), the income approach, and the cost approach. Smith and Parr describe these approaches in their book *Intellectual Property: Valuation, Exploitation, and Infringement Damages*²⁰ as does Reilly et al in several references.²¹

We briefly describe each valuation approach next and its suitability for this assignment.

Market Approach

Using the market approach, a valuation analyst looks for comparable transactions in the same industry and of the same relative size and form that recently occurred in the open market. The valuation analyst determines value indirectly using the comparable intellectual property transaction as a value proxy for target intellectual property. The reasoning seems logical: if the market paid \$X for rights to use or own that intellectual property once, then one would expect that the market would reasonably pay a similar amount again, all else the same.

A valuation analyst may use several methods for establishing this value using the market approach, depending on the desired value standard and value purpose. For example, if one desires the fair market value for licensing intellectual property to another company, the valuation analyst would look to other recent licensing transactions in the same industry and use a similar royalty rate. Another way to value intellectual property using the market approach is to use a gross multiplier such as a cash flow multiplier to arrive at a value. For example, if an intellectual property generates \$1 million of free cash flow in Year 5 and the valuation analyst uses a cash flow multiplier of eight, then the intellectual property is worth \$8 million.

²⁰ [5], p. 148-150.

²¹ [3], p. 366-371, [4], p. 478-482.

Valuation analysts use other multiplier factors commonly as well, and these factors are usually ratio-based. Once the valuation analyst arrives at a value, then the valuation analyst adjusts the intellectual property's value to account for identifiable differences, such as the market power of the comparable intellectual property to the intellectual property under valuation. Valuation analysts typically use the market approach to establish reasonable royalty rates for intellectual property licensing transactions.

The problem with the market approach to value is that it may not work well for general intellectual property valuation.²² First, comparable circumstances rarely exist. Intellectual property by its very nature is novel and unique. It is generally impossible for a valuation analyst to find a comparable transaction in the market. Therefore, any reference to other intellectual property transactions is at best a crude value approximation.

Second, the comparable may have the support and expertise of a proven management team, existing customers, available working capital, and a host of other factors that dictate why the intellectual property sold for the price it did. The intellectual property under valuation would require the same circumstances, or the valuation analyst must make adjustments to account for material differences. However, these adjustments are generally arbitrary approximations themselves. Their use can compound valuation error.

Third, the market is not rational at times. Investors enter the market routinely with imperfect information, and these investors increase the probability of irrationally high transaction values. Market participants also leave the market irrationally and abnormally depress market transaction prices, even though the fundamental value drivers for an asset remain unchanged.

Fourth, the value of the intellectual property depends on the application of the intellectual property to the market, and the circumstances need to be similar to serve as a credible value proxy. The trademark for a soft drink may not command near the value applied to a car that it does for fruit-flavored, sugar-sweetened water. To use a soft drink brand transaction as a basis for establishing the value of a car's brand is not appropriate either—the two are altogether different in their application and industry.

Fifth, the comparable transaction may represent a portfolio of intellectual property. It is rare to find standalone comparable intellectual property transactions that do not include other bundled tangible or intangible assets.²³ After extensive research, we found no evidence of any comparable corporate entity, let alone financial information and valuation we could use as a value proxy for the Subject Property.

Finally, there was no other formal offer or other value indicator for the Subject Property. Thus, we had nothing we could use as a reasonable value proxy for the Subject Property.

For all of these reasons, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that the market approach, regardless of market multiples we may have used (e.g., price to earnings, price to cash flow, etc.), would not provide a credible valuation result for this assignment.

²² [6], p. 6.

²³ [6], pp. 6-7.

Income Approach

Valuation analysts typically use the income approach for intellectual property valuation assignments. A valuation analyst using the income approach bases his or her opinion on the intellectual property owner's business plan, marketing and operational inputs, and other external references. Using this method, the valuation analyst projects the economic income generated solely from the intellectual property over a discrete period, known as the remaining useful life (RUL) as well as any residual value after the RUL.

The RUL is generally one of the most difficult attributes of the intellectual property's value to determine when using the income approach. Unfortunately, it is also one of the most significant drivers for the intellectual property's value. Intellectual property with a long RUL will be worth more than intellectual property with a shorter RUL. The RUL will vary based on the intellectual property under review. Certain intellectual property may have a longer RUL than others (e.g., a patent for a truck gas tank mount versus a patent on a software search algorithm) because of technological risk or the probability of easy substitutions.

To determine economic income, the valuation analyst projects the revenue (or cost savings or other economic benefit) generated from the intellectual property over the RUL, and then offsets that revenue with costs related directly to the intellectual property's exploitation such as labor, materials, required capital investment, and any appropriate economic rents or capital charges. There are several methods that a valuation analyst employs to measure economic income associated with a given piece of intellectual property. Some include the net income method and the profit split method.

If applicable, the valuation analyst will also consider some residual intellectual property value after the RUL. That is, even after the RUL is over, there may be some residual value to the intellectual property because of market factors. For example, a bankrupt company's trademark may have value even though the company is no longer in operation. A valuation analyst may opine that the residual value may decrease over five years to \$0. In this case, the valuation analyst would calculate the decreasing cash flows for the five years after the RUL, discount those to the present value, and add those to the value of the cash flows calculated over the RUL.

With cash flows for each discrete year in the RUL and a calculated residual value, the valuation analyst discounts these cash flows using an appropriate discount rate to the present value. This becomes the intellectual property's value before the valuation analyst applies any applicable value adjustments.

The income discount rate that the valuation analyst uses has, aside from the RUL, one of the largest value impacts. There is an inverse relationship between the discount rate and value. Higher discount rates lower value, and vice versa. This is desirable, as it mirrors classic risk/reward principles when determining an appropriate discount rate. Early-stage intellectual property, with little proven market power, commands a higher discount rate than proven intellectual property, because the risk of the early-stage intellectual property generating no economic income is higher than with proven intellectual property.

Given the wide use and acceptance of the income approach to valuing intellectual property and our ability to apply it to this assignment in a manner consistent with appraisal standards, it is our opinion, based upon a reasonable degree of probability

within the valuation profession, that the income approach provides a credible value indication for the Subject Property.

Cost Approach

A valuation analyst who values intellectual property using the cost approach looks at what it would cost to produce the intellectual property, or what it would cost to reproduce the intellectual property on a given effective date. The cost would include things like labor, materials, applied overhead, and capital charges. Depending on the effective date of the valuation, the valuation analyst may trend costs from a historical reference point to the effective date. For example, if the intellectual property owner has cost data from five years ago and wants the intellectual property value using the cost approach in today's dollars, the valuation analyst may grow the cost at the rate of inflation over those five years to arrive at the cost as of today. Once the valuation analyst accumulates all factors of the cost, the valuation analyst adjusts the final tally for obsolescence to arrive at a final value opinion.

There are several methods to establish value using the cost approach. The first method is to use the reproduction cost new method of the cost approach. Using this method, the valuation analyst looks to re-create the Subject Property using the same or similar development methods and materials as the original effort. The reproduction cost new method does not account for changes in technology, higher utility from other materials, and other factors. The second method is to use the replacement cost new method of the cost approach. Using this method, the valuation analyst considers what it would take to re-create the intellectual property, but the valuation analyst can consider the impact of new technology and development methods on the intellectual property re-creation effort.

Once the valuation analyst establishes value using the cost approach, the valuation analyst adjusts the value for obsolescence. Valuation analysts consider four types of obsolescence factors. These factors include functional, technological, and economic obsolescence, and physical deterioration.

Physical deterioration generally does not apply to intellectual property because intellectual property is intangible. Its physical manifestation, on mediums such as paper or electronic media, physically deteriorates, but the intellectual property itself never physically deteriorates. Functional, technological, and economic obsolescence do affect the value of intellectual property. Functional obsolescence occurs when the intellectual property user must incur excess operational costs to use the intellectual property versus current alternatives, which may be state of the art. Technological obsolescence occurs when technological forces render the intellectual property worthless. For example, patents for a next-generation computer floppy disk drive may likely be worthless because there are better technological options already on the market, such as high-capacity flash memory. Economic obsolescence occurs when the use of the intellectual property in its highest and best form cannot provide an adequate return on investment. This can occur in intellectual property easily because intellectual property is generally unique and may have little use outside of a particular function.

Some general problems exist with the use of the cost approach to value, particularly for general intellectual property valuation.²⁴ Cost does not equal value, and it is a common

²⁴ [6], p. 5.

misconception to relate the value of intellectual property to its investment amount, particularly with a lack of historical financial performance. It is a rare case when the cost and the value are the same. Future economic income potential, market timeliness, and profit potential drive the value of intellectual property. Moreover, the cost approach is an inappropriate theoretical model for the Subject Property because it is irrelevant for a valuation analyst to calculate a reproduction cost for a patent. This is because of the inherent monopolistic nature of the patents provided in statute. Specifically, any unauthorized reproduction would constitute an infringing work, subject to damages and possible injunctive relief. Thus, the cost to reproduce the Subject Property, regardless of the magnitude, is irrelevant.

As such, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that the cost approach would not provide a credible valuation result for the Subject Property in this assignment.

DAUBERT CONSIDERATIONS

Each of the valuation approaches meet with legal principles born out of the U.S. Supreme Court's *Daubert* decision regarding scientific evidence. These principles are that:²⁵

- The valuation method is testable.
- The valuation method has undergone publication and peer review.
- The valuation method has an acceptable rate of error and maintenance of standards concerning its operation.
- The scientific community has accepted the valuation method.

We briefly describe how each of the *Daubert* factors applies to the valuation methods we employed in this assignment.

Testable Valuation Method

We employed methods for this assignment that the general community has tested and applied as a matter of practice. For example, the valuation community uses and accepts the use of valuation methods that we employed, such as accounting for cash flow timing and summing historical costs. Measurable fundamental economic drivers are the basis for these other valuation methods that we employed. Thus, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that the methods that we used meet the criteria for testability.

Peer Review and Publication

We employed methods for this assignment based on practices outlined in peer-reviewed journals such as *Valuation Strategies Magazine*, the preeminent publication for valuation professionals. In fact, we have published articles in these journals after a rigorous peer-editing process that we encountered firsthand. Further, methods we employed fill numerous finance and valuation textbooks. Thus, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that the methods that we used meet the criteria for peer review and publication.

²⁵ [11], p. 247.

Acceptable Rate of Error and Maintenance of Standards

We employed methods for this assignment that the general community has tested and applied as a matter of practice, under standards also developed by the general community. For example, the valuation community uses and accepts the use of valuation methods that we employed, such as accounting for cash flow timing and summing historical costs. Measurable fundamental economic drivers are the basis for these other valuation methods that we employed. Thus, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that the methods that we used meet the criteria for acceptable rate of error and maintenance of standards.

Scientific Community Acceptance

We employed methods for this assignment based on practices outlined in both peer-reviewed journals and textbooks. Further, courts and tax jurisdictions have recognized the methods that we used. Thus, it is our opinion, based upon a reasonable degree of probability within the valuation profession, that the methods that we used meet the criteria for scientific community acceptance.

VALUATION ANALYSIS

Valuation Development Methodology and Supporting Detail

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GENERAL VALUATION MODEL CONSIDERATIONS

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Income Approach Valuation Methodology

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Accounting for Uncertain Valuation Assumptions

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Product Revenue Model

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Remaining Economic Life

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Income Tax Rate²⁹

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Currency and Country Risk

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Projected Revenue Recognition

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Regulatory Environment

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Capital Equipment Requirements

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Value Realization Working Capital

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Value Realization Timing

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Operating Expenses

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GENERAL MARKET CONSIDERATIONS

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Market Analysis Impacts on Valuation Model

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Market Acceptance

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Market Analysis Conclusion

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INTELLECTUAL PROPERTY CONSIDERATIONS

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Sustainable Competitive Advantages

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Risk Associated With Subject Property Value

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Active Government Patent Protections

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Ease of Infringement Detection

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APPROACHES TO DETERMINING ROYALTY RATES

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Establishment Via Negotiation

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Establishment Via Similar Licensing Transactions

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Establishment Via Return on Investment

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Establishment Via Analytical Methods

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Materials Sourcing Risk Conclusion

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GENERAL COMPUTER FAIR MARKET VALUE DEVELOPMENT

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Subject Property Value Proposition

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Competitive Market Review

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Value Conclusion Using the Income Approach

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DEFENSE CONTRACTOR FAIR MARKET VALUE DEVELOPMENT

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Subject Property Value Proposition

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Industry Overview – Field Programmable Gate Array (FPGA)

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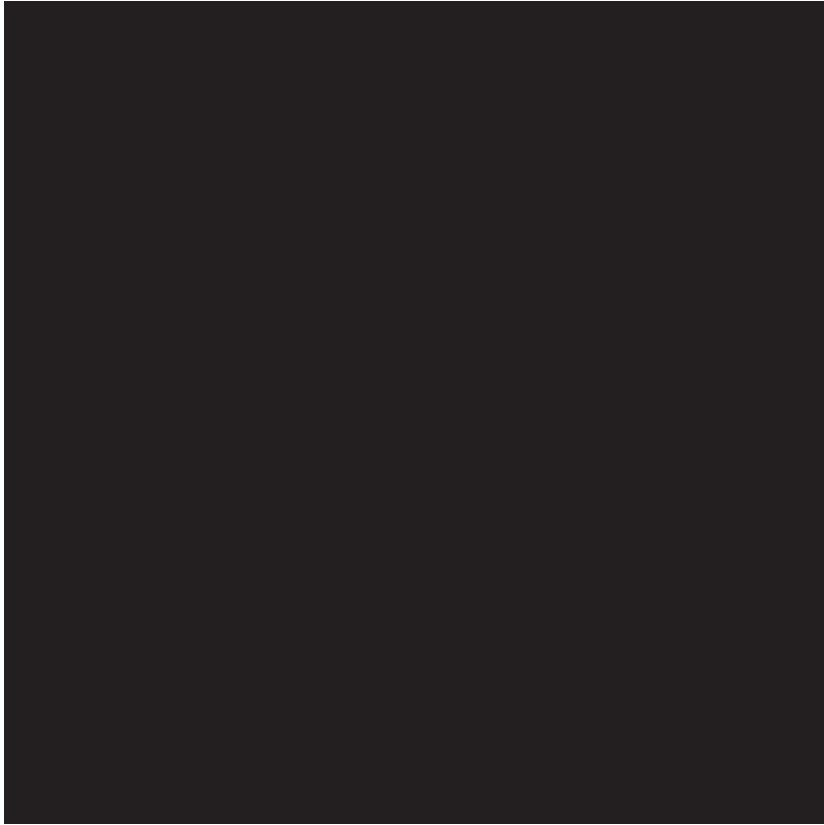
Industry Overview – Infrared Focal Plane Array (IR FPA)

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Industry Overview – Laser-Based Communications

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Applicable Markets

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Value Conclusion Using the Income Approach

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SMARTPHONE MARKET VALUE DEVELOPMENT

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Subject Property Value Proposition

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Industry Overview



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Competitive Market Review

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Applicable Markets

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Value Conclusion Using the Income Approach

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VALUATION ADJUSTMENTS

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Discount for Lack of Control

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Discount for Lack of Marketability

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Contractual Discounts and Premiums

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Key Person Discounts

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VALUATION SUMMARY

We determined value for three separate revenue streams associated with the Subject Property. The first revenue stream accounts for royalties ODIS may collect in exchange for a license for

²⁷¹ [6], p. 10.

the authorized use of Subject Property in the general computer market, focusing on desktop computers, mobile computers, and server computers. The second revenue stream accounts for future royalties ODIS may collect in exchange for a license for the authorized use of the Subject Property by defense contractors. The third revenue stream accounts for future royalties ODIS may collect in exchange for a license for the authorized use of the Subject Property in smartphone applications.

It is our opinion, based upon a reasonable degree of probability within the valuation profession, that the fair market value of the Subject Property in the market applications that we evaluated is **\$966,506,178**. The value components are as follows:

Component	Minimum Value	Maximum Value	Mean Value	Median Value
General Computer Market Value			\$1,064,626,653	\$729,847,406
Defense Contractor Value			\$83,354,006	\$80,579,422
Smartphone Value			\$163,504,259	\$156,079,350
Total Value			\$1,311,484,918	\$966,506,178

GLOSSARY

A Reference for Key Terms and Definitions

The following are a set of common terms that may have appeared in this report.

- **Accumulated depreciation:** This is the cumulative depreciation recognized as of a given date on the balance sheet.
- **Amortization:** This accounting procedure gradually reduces the cost value of an intangible asset through period changes to income.²⁷²
- **Application software:** An application program is a written sequence of instructions that detail the operations the equipment is to perform in order to achieve a specific objective of the user.
- **Applied overhead:** This is an allocation of production costs that are too small to track individually against units of production.
- **Balance sheet:** This is a financial statement showing the status of a company's assets, liabilities, and owner's equity on a given date.²⁷³
- **Book value:** This is the value at which an asset is carried on the balance sheet.²⁷⁴
- **Business enterprise:** This is the sum total of all tangible and intangible assets, including a normal level of working capital that comprises a going business concern, the value of which equates to the total invested capital of the economy.
- **Business risk:** This is the coefficient of variation of operating earning that indicates volatility in the business earnings.
- **Capital asset:** This long-term asset is not bought or sold in the normal course of business.²⁷⁵
- **Capital investment:** This is an outlay of money to acquire or improve capital assets such as buildings and machinery.²⁷⁶
- **Cash flow:** This is an analysis of all changes that affect the cash accounting during an accounting period.²⁷⁷
- **Common stock:** This refers to units of ownership of a corporation.
- **Cost approach:** This is a valuation method that explores actual or reproduction cost of what it took to construct an asset. It includes labor, materials, applied overhead, and capital charges. See obsolescence, replacement cost new method, and reproduction cost new method.
- **Cost of capital:** This is the rate of return that a business could earn if it chose another investment with equivalent risk.²⁷⁸
- **Cost of equity:** This is the specific rate of return that an investor demands for a given risk level.
- **Cost of goods sold:** This is a figure representing the cost of buying raw materials and producing finished goods.²⁷⁹

²⁷² [12], p. 191.

²⁷³ [12], p. 215.

²⁷⁴ [12], p. 239.

²⁷⁵ [12], p. 256.

²⁷⁶ [12], p. 257.

²⁷⁷ [12], p. 264.

²⁷⁸ [12], p. 310.

²⁷⁹ [12], p. 310.

- **Depreciation**: This is the amortization of a fixed asset to allocate the cost of wear and tear over the useful life of the asset.
- **Direct labor**: This labor varies directly with the outputs of the business.
- **Direct materials**: These are raw materials required to create a product.
- **Discrete value**: This is a value distinct and explicitly measured.
- **Dividend**: This is a distribution of corporate earnings to shareholders, prorated by the class of stock .
- **Earnings before interest taxes (EBIT)**: This is the corporate profits before interest and taxes are paid, but after depreciation and amortization expenses.
- **Earnings before interest taxes, depreciation, and amortization (EBITDA)**: This is the corporate profits before interest and taxes are paid, but after interest, depreciation, and amortization are recognized.²⁸⁰
- **Earnings before taxes (EBT)**: This is corporate profits before taxes are paid, but after interest, depreciation, and amortization expenses.²⁸¹
- **Equity**: This is ownership interest possessed by shareholders in a corporation.²⁸²
- **Extraordinary assumption**: This is an assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser’s opinions or conclusions. Presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject IP; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in analysis.²⁸³
- **Fair market value**: The price at which a willing buyer would purchase a property and a willing seller would sell the same property, when neither party is under any compulsion to buy or sell, and each party has full knowledge of all pertinent facts relating to the sale.
- **Fair market value**: This is the amount at which an asset or liability could be bought or sold in a current transaction between willing parties, that is, other than a forced or liquidation sale. It is also called a fair price. In accounting, fair market value is used as an estimate of the market value of an asset (or liability) for which a market price cannot be determined (usually because there is no established market for the asset).
- **Fixed assets**: This is tangible property used in the operations of a business, but not expected to be consumed or converted into cash in the ordinary course of events.²⁸⁴
- **Free cash flow**: This is the amount of cash a company has after expenses, debt service, capital expenditures, and dividends.²⁸⁵
- **Gross margin**: This is net sales less the cost of goods sold.²⁸⁶
- **Hypothetical condition**: This is a condition, which is contrary to what exists, but the appraiser supposes for the purpose of analysis. Assume conditions contrary to known facts about physical, legal, or economic characteristics of the subject IP; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in analysis.²⁸⁷

²⁸⁰ [12], p. 364.

²⁸¹ [12], p. 362.

²⁸² [12], p. 380.

²⁸³ [1], p. 3.

²⁸⁴ [12], p. 422.

²⁸⁵ [12], p. 436.

²⁸⁶ [12], p. 461.

²⁸⁷ [1], p. 3.

- **Income approach:** This is a method of valuation whereby the value of the asset is the present value of the future economic income it will generate.
- **Income statement:** This financial statement summarizes revenues, costs, and expenses of a company during an accounting period.²⁸⁸
- **Inflation rate:** This is the average rate of rise in the prices and goods and services over time.
- **Intangible asset:** This is a right of a nonphysical resource presumed to represent an advantage to the firm's position in the marketplace.²⁸⁹
- **Key person discount:** This is a value discount that applies when certain individuals or group of individuals have a material impact on the success or failure of a given asset based on their participation.
- **Market acceptance:** This occurs when end users of the technology report feelings of satisfaction with the products and indicate a demand for additional products.
- **Market approach:** This is a valuation approach that generates a value opinion using market rates for similar transactions as a basis for the asset under consideration.
- **Net income:** This is the difference between total sales and total costs and expenses.²⁹⁰
- **Obsolescence:** This is when an object, person, or service is no longer desired, even though it may still be in good working order. There are four types of obsolescence and they include the following:
 - *Functional obsolescence:* This occurs when an asset user must incur excess operational costs to use the asset versus alternatives assets.
 - *Technological obsolescence:* This occurs when technological forces render the asset inferior to other technologically superior assets.
 - *Economic obsolescence:* This occurs when the use of the asset in its highest and best form cannot provide an adequate return on investment.
 - *Physical deterioration:* This occurs when an asset physically deteriorates (e.g., paint peels on a house).
- **Operating cash flow:** This is the amount of cash flow generated or consumed related specifically to the operations of the firm, excluding capital and financing efforts.
- **Operating expenses:** These are costs incurred in the normal operations of the business.
- **Operating systems software:** This is an operational program that controls the hardware and actually makes the machine operational. It is fundamental and necessary to the functioning of the computer hardware itself and performs such functions as loading, scheduling, supervision, and data management. It represents the internalized instruction codes that translate information into a form usable by the equipment, and controls the basic operations of the central processing unit to perform arithmetic and/or logical operations automatically by means of programmed instructions.
- **Post-tax net income:** This is the net income available after income taxes are paid.
- **Post-tax net income margin:** This is the ratio of post-tax net income to net sales.
- **Preferred stock:** This is a class of capital stock that pays dividends at a specified rate and has a preference over common stock in the payment of dividends and liquidation of assets.

²⁸⁸ [12], p. 705.

²⁸⁹ [12], p. 502.

²⁹⁰ [12], p. 615.

- **Replacement cost new method**: This is a cost approach valuation method that considers what it would take to re-create an asset, but one can consider the impact of new technology and development methods on the asset re-creation effort.
- **Reproduction cost new method**: This is a cost approach valuation method that considers re-creating the subject asset using the same or similar development methods and materials as the original effort. Unlike the replacement cost new method, this method does not account for changes in technology, higher utility from other materials, and other factors.
- **Retained earnings**: This is the net profits kept to accumulate in a business after the dividends are paid.²⁹¹
- **Sales force model**: This is a model with which a company seeks to sell its products in the market, either with direct staff, our outsourced sales and marketing support.
- **Straight-line depreciation**: This is a method of depreciating a fixed asset whereby one divides the asset's useful life into the total cost less the estimated salvage value to arrive at a periodic expense for the asset.²⁹²
- **Weighted average cost of capital**: This is the calculation of a firm's cost of capital where one proportionally weights each category of capital by the percentage of the total capital structure it contributes.
- **Working capital**: These are funds held in cash accounts to serve the company's operating cash needs.

²⁹¹ [12], p. 748.

²⁹² [12], p. 848.

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[REDACTED]

[22] Parr, Russell L., Patrick Sullivan et al, *Technology Licensing: Corporate Strategies for Maximizing Value*, John Wiley & Sons Inc., New York, 1996.

[REDACTED]

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APPENDIX A – LIMITING CONDITIONS

Statement of Contingent and Limiting Conditions

Pellegrino & Associates, LLC presents this appraisal subject to the following general contingent and limiting conditions:

- Users of this valuation report must recognize that valuations are based on future earnings potential that may or may not materialize. Therefore, the actual results achieved during the projection period will likely vary from the projections utilized in this valuation, and the variations may be material.
- Some assumptions invariably will not materialize, and unanticipated events and circumstances may occur. Therefore, the actual performance in any areas forecasted will vary from what was forecasted, and the variations may be material. Pellegrino & Associates, LLC will not express any form of assurance on the likelihood of achieving the forecast or on the reasonableness of the used assumptions. Any such forecast is presented as part of the valuation and is not intended to be used separately.
- The value premise(s) cited in this report are fundamental to the value opinions rendered herein, and Pellegrino & Associates, LLC reserves the right to reconsider such premise(s) should subsequent or additional information be discovered, although no such obligation exists.
- Pellegrino & Associates, LLC has relied upon the representations of the owners, management, and other qualified third parties concerning the value and useful condition of all assets under consideration, except as specifically stated to the contrary in this report. Pellegrino & Associates, LLC has not attempted to confirm whether or not all assets are free and clear of liens and encumbrances, or that the owner has good title to all assets.
- Since neither management nor advisors have advised Pellegrino & Associates, LLC otherwise, Pellegrino & Associates, LLC assumes that there is full compliance with all applicable federal, state, and local laws and regulations unless the lack of compliance is stated, defined, and considered in the valuation report.
- Pellegrino & Associates, LLC used public information and purchased private information and industry statistical information from sources it deems reliable; however, Pellegrino & Associates, LLC makes no representation as to the accuracy or completeness of such information and has accepted the information without further verification.
- Pellegrino & Associates, LLC assumes no hidden or unapparent conditions regarding the Subject Property.
- No opinion, counsel, or interpretation is intended in matters that require legal or other appropriate professional advice. It is assumed that such opinions, counsel, or interpretations have been or will be obtained from the appropriate professional sources.
- The analyses, opinions, and conclusions presented in this report apply to this engagement only and may not be used out of the context presented herein. This report is valid only for the effective date(s) specified and only for the purpose(s) specified herein.
- Although Pellegrino & Associates, LLC has exerted considerable diligence and applied its best efforts in constructing this document, immaterial anomalies, if any, may arise. Even so, Pellegrino & Associates, LLC is confident that its overall conclusion would still fall within a materially consistent conclusion.

- While the client has not informed Pellegrino & Associates, LLC of any intent to do so, any third parties to whom this report is shown may be assured that this report, while performed in the employ of the client, was materially prepared on a non-advocacy basis. Any third persons, however, are cautioned that Pellegrino & Associates, LLC has no duty to these third persons and, therefore, no warranty is expressed or implied. Nothing in this report is intended to replace the independent sole judgment, due diligence, or decision to seek professional, legal, accounting, or valuation counsel of a third party.
- This report has been prepared solely for the use of the party or parties named and specifically for the purposes set out therein. In accordance with normal practice, Pellegrino & Associates, LLC hereby disclaims liability to any other person. Any other person should not rely upon the information and conclusions reached, nor should any statement in this report be used for any other purpose without written consent from Pellegrino & Associates, LLC.
- The statements and opinions given in this report are given in good faith and in the belief that such statements are not false or misleading. In preparing this report, Pellegrino & Associates, LLC has relied upon information believed to be reliable and accurate provided by the owners, management, and advisors of the asset owner and other sources. Pellegrino & Associates, LLC has no reason to believe that any material facts have been withheld from it, nor does Pellegrino & Associates, LLC warrant that its investigation has revealed all of the matters in which an audit or more extensive examination might disclose.
- This valuation reflects facts and conditions existing at the date of this valuation. Pellegrino & Associates, LLC has not considered subsequent events, and Pellegrino & Associates, LLC has no obligation to update its report for such events and conditions.
- Pellegrino & Associates, LLC does not purport to be a guarantor of value. Valuation is an imprecise science, with value being a question of fact, and reasonable people can differ in their estimates of value. Pellegrino & Associates, LLC, however, performed conceptually sound and commonly accepted methods and procedures of valuation in determining the estimate of value included in this report. Pellegrino & Associates, LLC is not liable for any use, reliance, financial applications, report distribution, or other utilization of any kind by any party not having written authorization from Pellegrino & Associates, LLC.
- The appraised estimate of fair market value in this report is based on the definition applied throughout the report. An actual transaction may be completed at a value higher, lower, or equal to the value rendered herein. Pellegrino & Associates, LLC makes no guarantee of any kind with regard to the likely or ultimate amount that may result in any future transaction.
- The opinion(s) offered in this report do not constitute an offer to buy or sell securities.
- The valuation analyst, by reason of performing this valuation and preparing this report, is neither required to give expert testimony nor attend in court or any government, professional, or regulatory hearing, including IRS matters with reference to the matters contained herein, unless prior written arrangements have been made with Pellegrino & Associates, LLC regarding such additional engagement as to the timing, fee arrangements, and nature of the services required.
- None of the partners or employees of Pellegrino & Associates, LLC has any present or contemplated future interest in the property being valued, any personal interest with respect to the parties involved, or any other interest that might prevent Pellegrino & Associates, LLC from performing an unbiased valuation. Pellegrino & Associates, LLC's

compensation is not contingent on an action or event resulting from the analysis, opinions, or conclusions in, or the use of, this report.

- Neither all nor any part of the contents of this report shall be disseminated to the public through advertising, public relations, news, sales, or other media without our prior written consent and approval.
- Possession of this report does not carry with it the right of publication. This report may not be used for any purpose by any person other than the client to whom it is addressed without the express written consent of Pellegrino & Associates, LLC, and, in any event, only with proper written qualifications and only in its entirety.
- Liability of Pellegrino & Associates, LLC and its partners and employees for errors and omissions, if any, in this work will be limited to the amount of its compensation for the work performed in this assignment, but only to the extent that such compensation has been paid to Pellegrino & Associates, LLC.
- This report is further subject to any other contingencies, assumptions, and limiting conditions that may be set out elsewhere within this report.

APPENDIX B – VALUATION CERTIFICATION

We certify that, to the best of our knowledge and belief:

- Statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions. They are our personal, impartial, unbiased professional analyses, opinions, and conclusions.
- We have no present or prospective interest in the property that is the subject of this report, and we have no personal interest with respect to the parties involved.
- We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
- Our compensation is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- We have made a personal inspection of the property that is the subject of this report.
- Our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice, as promulgated by The Appraisal Foundation.
- The following person(s) provided significant professional assistance to the author signing this report: Jeff Champa, Emad Isaac, and Jill Starbuck.

Michael J. Pellegrino, MBA
President
Pellegrino & Associates, LLC

APPENDIX C – ANALYST QUALIFICATIONS

Analyst Qualifications & Relevant Experience

The following provided material support to the generation of this report.

MICHAEL J. PELLEGRINO, MBA

Michael Pellegrino is the President of Pellegrino & Associates, LLC. Mr. Pellegrino has a Bachelor's degree in computer science from Indiana Institute of Technology and a Master's degree in business administration from Ball State University. He also has taken additional accounting coursework sufficient to fulfill the academic requirements of the Certified Public Accountant (CPA) exam.

As a computer scientist, Mr. Pellegrino has worked on many different types of engagements as both a software developer and/or project/program manager including the following:

- Was a technical consultant for a city infrastructure asset management application located in Minneapolis, MN
- Designed and implemented a complete inventory control system for an automobile part exporter in Centereach, NY
- Designed and implemented an office automation system for a tax attorney in Fort Wayne, IN
- Installed and maintained office networks for small businesses in Fort Wayne, IN
- Designed and implemented a real-time database application for a magnet wire company to bar-code scan and weigh product for collection and quality control in Fort Wayne, IN
- Designed and implemented a real-time database application for a large speaker manufacturer to weigh product for collection, label printing, and quality control in Fort Wayne, IN
- Designed and implemented a database for a county sheriff's office to manage tax warrants, receipts, adjustments; generate reports, labels, etc. in Fort Wayne, IN
- Developed VMM, the first Virtual Memory Manager for the Palm Pilot programming platform. Posted at <http://www.palmgear.com>, it has generated over 4,500 downloads
- Designed and implemented complete back-up computer system (BUCS) for the Marine Corps Programs Department to calculate artillery positions using numerous surveying techniques on a rugged PDA platform in Fort Wayne, IN
- Performed requirements analysis, design, implementation, and testing on consumer television software for Windows 95 (Thomson Consumer Electronics)
- Performed requirements analysis and design of a van operator database system to track and transmit 60 GB of data per year over slow-links to a central repository for post-processing (North American Van Lines)
- Performed requirements specification, analysis, and object-oriented design, implementation, and testing of a communication server to abstract the Allen Bradley DeviceNet CAN protocol for an engine service tool (Caterpillar, Inc.)
- Performed requirements, analysis, and design of a Palm Pilot application and conduit to collect time card data on a handheld device and synchronize it with a back-end database over a WAN in Fort Wayne, IN

- Performed requirements analysis and design for a Windows CE data acquisition application to extract data from a National Instruments PCMCIA oscilloscope card and present it in real time for CE 2.0 devices in Fort Wayne, IN
- Performed design analysis and performance improvement recommendations with risk assessments for a major mapping software developer's Palm-based product for Rand McNally
- Performed requirements analysis and design for a Windows CE device driver for a Delorme EarthMate GPS receiver in Fort Wayne, IN
- Modified a production-level NT 4.0 device driver published by SysTran, Inc. (makers of SCRAMNet reflective memory networks at <http://www.systran.com>) to include a published mutual exclusion algorithm for synchronization of multiple-node accesses to a given guarded block of memory (International Truck & Engine Corporation)
- Performed requirements analysis and object-oriented design of distributed communications server to abstract J1939 (CAN) and J1587 vehicle networks (International Truck & Engine Corporation)
- Performed requirements specification, analysis, and object-oriented design of a complete MFC & Objective Toolkit/Edit application for performing hardware-in-the-loop testing of vehicle electronic control module (ECM) software (International Truck & Engine Corporation)
- Performed software analysis and mentoring for a real-time CORBA-centric embedded military radio application (ITT Industries)
- Performed design analysis and offered recommendations with risk assessments for an image-capture application for a driver's license system (Polaroid, Inc).
- Designed/prototyped Java applications to perform interactive image editing in Fort Wayne, IN
- Designed an automated and reliable model for high-volume image scanning and processing in Fort Wayne, IN
- Designed, implemented, and maintained a Microsoft Access database to characterize and track industrial engineering drawings in Fort Wayne, IN
- Designed, implemented, supported, and documented a library of routines to connect virtual reality environments, super-computers, and heterogeneous networks (United States Department of Energy)
- Coded necessary routines for an extension to the MPI standard with respect to dynamic process management (United States Department of Energy)
- Ported a VAX assembly language file monitoring tool to Alpha processor (United States Department of Energy)

Mr. Pellegrino has substantial experience in the following computer languages and technologies: C, C++, Java, BASIC, various assembly languages, relational database design, MFC, ATL, COM, Palm Pilot, and CORBA.

Mr. Pellegrino has passed the following Microsoft certification exams for software development professionals: Microsoft Windows Architecture I & II, Microsoft Access Database Environment, Microsoft Visual C++, and Microsoft Foundation Classes (MFC).

Mr. Pellegrino is a co-inventor on the following patents:

- Patent #6,907,445 titled *Consistent Application Programming Interface for Communicating with Disparate Vehicle Network Classes*, awarded June 2005.

- Patent #7,421,334 titled *Centralized Facility and Intelligent On-Board Vehicle Platform for Collecting, Analyzing and Distributing Information Relating to Transportation Infrastructure and Conditions*, awarded September 2, 2008.

Mr. Pellegrino has testified in the following proceedings:

- *Medical Informatics Engineering, Inc. vs. Orthopedics Northeast, P.C., triPractix, LLC, Raymond Kusisto and Todd Plesko, Deposition*, United States Federal Court, Northern District of Indiana, Cause 1:06-cv-00173-WCL-RBC.
- *Vernon et al v. Cuomo et al*, Appointed as a neutral valuation expert, North Carolina Business Court, Wake County, Cause 06CVS8416.
- Expert testimony in an appeals conference with the Internal Revenue Service in support of a Section 41 income tax controversy for a Fortune 100 company.
- Valuation consulting services for *Scalf v. LCCVB*, Lake Superior Court, Civil Division, Cause No. 45D10-0406-PL-00093.

Mr. Pellegrino has authored the following book regarding software and intellectual property matters:

- *BVR's Guide to Valuing Intellectual Property*, Business Valuation Resources, July 2009.

Mr. Pellegrino has authored or co-authored the following technical pieces regarding software- and finance-related matters:

- Pellegrino, Michael J., "Taking Issue With the Value of Tiger Woods' Sponsorships," *Business Valuation Update*, Business Valuation Resources, Vol. 16, No. 3, March 2010.
- Pellegrino, Michael J., "Intellectual Property Cost of Capital Estimation Model," *Valuation Strategies Magazine*, Thomson Tax & Accounting, May/June, 2009, pp. 6-15, 47.
- Pellegrino, Michael J., "Why the Income Approach is Favored When Valuing Intellectual Property (IP)," *Business Valuation Update*, Business Valuation Resources, Vol. 15, No. 5, May 2009.
- Pellegrino, Michael J., "Key Questions to Help IP Analysts Choose the Right Valuation Method," *Business Valuation Update*, Business Valuation Resources, Vol. 15, No. 1, January 2009.
- Pellegrino, Michael J., "Valuing Voting Rights in an IP Holding Company," *Business Valuation Update*, Business Valuation Resources, Vol. 14, No. 9, September 2008.
- Pellegrino, Michael J., "Misusing Fair Market Value," *Valuation Strategies Magazine*, Thomson Tax & Accounting, March/April, 2008, pp. 12-27, 48.
- Brewer, Ryan M. and Michael J. Pellegrino, "Exceeding Auditor Expectations: A Guide to IP Valuation Reports," *Business Valuation Update*, Business Valuation Resources, Vol. 14, No. 4, April 2008.
- Pellegrino, Michael J., "Reality Check: Testing Valuation Conclusions for 'Fool's Market Value'," *Business Valuation Update*, Business Valuation Resources, Vol. 13, No. 12, December 2007.
- Buuck, Dale E., and Michael J. Pellegrino, "The Valuation of Early Stage Technologies," *Valuation Strategies Magazine*, Thomson Tax & Accounting, May/June, 2007, pp. 4-13, 44-47.

- Pellegrino, Michael J., “Maximizing Favorable Tax Treatment for Software Embedded in Purchased Assets,” *The Journal of Taxation*, Thomson Tax & Accounting, August 2006, pp. 79-89.
- Pellegrino, Michael J., “The Valuation of Intellectual Property,” in the Proceedings of the 2005 Valuation for Mergers and Acquisition Seminar, Indiana Continuing Legal Education Forum, December, 2005.
- Pellegrino, Michael J., “The Valuation of Embedded Application Software,” *Valuation Strategies Magazine*, November/December 2005, pp. 12-20.
- Pellegrino, Michael J., “PRO-SPEAK: Legislature Clearing Up Software Tax-Exemption Confusion,” *Business People Magazine*, July 2005, pp. 114-116.
- Pellegrino, Michael J., “Cutting Taxes for Electrical Manufacturing and Coil Winding Companies,” Proceedings of the 2005 Electrical Manufacturing & Coil Winding Conference, Electrical Manufacturing & Coil Winding Association, Indianapolis, IN, October 2005, pp. 263-266.
- Pellegrino, Michael J., “CLR Debugging: Improve Your Understanding of .NET Internals by Building a Debugger for Managed Code,” *MSDN Magazine*, November 2002, pp. 89-103.
- Pellegrino, Michael J., “Active Scripting APIs: Add Powerful Custom Debugging to Your Script-Hosting App,” *MSDN Magazine*, December 2000, pp. 71-91.
- Disz, T., M. Papka, M. Pellegrino, and M. Szymanski, CAVEcomm Users Manual, Argonne National Laboratory Publication ANL/MCS-TM-218, December 1996.
- Pellegrino, Michael J., “Virtual Co-Location and Remote Engineering in the Coil Winding Industry,” Proceedings of the 1996 Electrical Manufacturing & Coil Winding Conference, Electrical Manufacturing & Coil Winding Association, Rosemont, IL, September 1996, pp. 387-393.
- Disz, T., M. Papka, M. Pellegrino, and R. Stevens, “Sharing Visualization Experiences Among Remote Virtual Environments,” Proceedings of the International Workshop of High Performance Computing for Computer Graphics and Visualization, Swansea, Wales, July 1995.
- Disz, T., M. Papka, M. Pellegrino, R. Stevens, and V. Taylor, “Virtual Reality Visualization of Parallel Molecular Dynamics Simulation,” Simulation Multi-Conference Symposium, Society for Computer Simulation, Phoenix, AZ, April 1995, pp. 483-487.

Mr. Pellegrino delivered the following presentations within the last ten years:

- Pellegrino, Michael J., “Valuation of Early-Stage Technology—Practical Approaches to Ensure Fair Deals,” Management Roundtable Webinar, December 2010.
- Pellegrino, Michael J., “Using Simulation Techniques in Litigation,” Palisade Software Teleconference, October 2010.
- Pellegrino, Michael J., “Recent Trends in Buying & Selling Your Nanotech Company,” Nano Business Alliance Conference, Chicago, IL, September 2010.
- Pellegrino, Michael J., “Why Value IP?” IP Summit, Chicago, IL, September 2010.
- Pellegrino, Michael J., “Monetizing IP Assets to Increase Shareholder Value,” IP Summit, Chicago, IL, September 2010.
- Pellegrino, Michael J., “The Critical Intersection of IP Valuation and Fair Value for Financial Reporting,” IP Summit, Chicago, IL, September 2010.
- Pellegrino, Michael J., “Valuation in an Era of Healthcare Reform: The Valuation of Healthcare Enterprises, Assets, and Services in a Changing Reimbursement and

Regulatory Environment,” American Society of Appraiser’s 2010 Internal Appraisal Conference, Las Vegas, NV, July 2010.

- Pellegrino, Michael J., “Intellectual Property Valuation for Litigation,” Intellectual Property Valuation & Litigation, Indiana Continuing Legal Education Forum (ICLEF) Conference, Indianapolis, IN, June 2010.
- Pellegrino, Michael J., and Rob Schlegel, “Software Valuation,” BVR Teleconference, June 2010.
- Pellegrino, Michael J., “The Mechanics of Intellectual Property Valuation,” Intellectual Property Valuation & Litigation, Indiana Continuing Legal Education Forum (ICLEF) Conference, Indianapolis, IN, April 2010.
- Pellegrino, Michael J., Tom Miller, David Dufendach, Brad Pursel, and Mike Taylor, “Advanced Workshop on Valuing Early Stage IP,” BVR’s 3rd Annual Summit on Fair market value for Financial Reporting, New York City, February 2, 2010.
- Pellegrino, Michael J., “Intellectual Property Valuation Workshop,” National Innovation Conference and Exhibition, Putra World Trade Center, Kuala Lumpur, Malaysia, October 2009.
- Pellegrino, Michael J., “Valuing Intellectual Property,” National Innovation Conference and Exhibition, Putra World Trade Center, Kuala Lumpur, Malaysia, October 2009.
- Pellegrino, Michael J., “Valuation for Entrepreneurs,” Purdue University Faculty Tech Boot Camp, Purdue University, West Lafayette, IN.
 - October 2010
 - March 2010
 - October 2009
 - September 2009
 - August 2009
 - April 2009
 - October 2008
 - October 2007
- Pellegrino, Michael J., Rob Schlegel, and Neil Beaton, “An IP Cost of Capital Estimation Model,” BVR Teleconference, August 2009.
- Pellegrino, Michael J., Bill Sipes, and Kevin Yeanoplos, “Valuing Intellectual Property in Entertainment and the Arts,” BVR Teleconference, June 2009.
- Pellegrino, Michael J., Dustin DuBois, “Pharmaceuticals & Medical Devices: Building & Valuing Intellectual Property Portfolios,” BVR Teleconference, December 2008.
- Pellegrino, Michael J., “Panel Discussion Regarding Considerations in IP Valuation for Litigation,” Indiana Continuing Legal Education Forum (ICLEF) Conference, Indianapolis, IN, November 2008.
- Pellegrino, Michael J., “Differences Between IP Valuation and Business Valuation,” Barnes & Thornburg, September 2008.
- Pellegrino, Michael J., “IP Valuation Roundtable,” Barnes & Thornburg, September 2008.
- Pellegrino, Michael J., “How to Value Intellectual Property,” Indiana Continuing Legal Education Forum (ICLEF) Conference, Indianapolis, IN, June 2008.
- Pellegrino, Michael J., “Valuation for Entrepreneurs,” Purdue University Faculty Tech Boot Camp, Purdue University, West Lafayette, IN, October 2007.
- Pellegrino, Michael J., “Valuation for Angel Investors,” Successful Angel Investing: The Art of the Deal Conference, AngelNet, Indianapolis, IN, August 2007.

- Pellegrino, Michael J., “Indiana’s New Income Tax Deduction for Intellectual Property,” Techpoint New-Economy New Rules Meeting, Indianapolis, IN, July 2007.
- Pellegrino, Michael J., “Great Inventions Deserve Protection: Learn How to Protect and Value Your Important IP Assets,” Webinar Co-Sponsored by Pellegrino & Associates, LLC and Ice Miller LLP, Indianapolis, IN, June 2007.
- Pellegrino, Michael J., “The Value in Protecting and Exploiting Intellectual Property and Other Licensing Matters,” Indiana Continuing Legal Education Forum (ICLEF) Conference, Indianapolis, IN, December 2006.
- Pellegrino, Michael J., “Capturing the Value of Invisible Assets,” Seminar Co-Sponsored by Pellegrino & Associates, LLC and Barnes & Thornburg LLP, Indianapolis, IN, December 2006.
- Pellegrino, Michael J., “Issues in Bioenergy Valuation,” American Society of Appraisers Indiana Chapter Lunch, Indianapolis, IN, September 2006.
- Pellegrino, Michael J., “How to Value Intellectual Property,”
 - BioStart Business Incubator, Cincinnati, OH, March 2008.
 - Indiana Venture Center, Indianapolis, IN, July 2007.
 - Northeast Indiana Innovation Center, Fort Wayne, IN, January 2007.
 - Indiana Venture Center, Indianapolis, IN, June 2006.
 - National Science Foundation Small Business Innovation Research National Conference, Louisville, KY, May 2006.
 - Northeast Indiana Angel Investor Meeting, Fort Wayne, IN, April 2006.
 - Indiana Venture Center, Indianapolis, IN, June 2005.
 - Northeast Indiana Innovation Center, Fort Wayne, IN, June 2005.
 - Vision Angel Investor Reception, Muncie, IN, May 2005.
- Pellegrino, Michael J., “Tax Issues for Embedded Software,” National Property Tax Group Quarterly Meeting, Indianapolis, IN, April 2006.
- Pellegrino, Michael J., “Leveraging Intellectual Property to Maximize Your Company’s Value,” Techpoint New-Economy New Rules Meeting, Indianapolis, IN, April 2006.
- Pellegrino, Michael J., “How to Value Intellectual Property for M&A Transactions,” Indiana Continuing Legal Education Forum (ICLEF) Conference, Indianapolis, IN, December 2005.
- Pellegrino, Michael J., “Indiana’s New Property Tax Laws for Software,” Techpoint CFO Peer Group, Indianapolis, IN, August 2005.
- Pellegrino, Michael J., “Cutting Taxes for Electrical Manufacturing and Coil Winding Companies,” Electrical Manufacturing & Coil Winding Conference, Indianapolis, IN, October 2005.
- Pellegrino, Michael J., “Intellectual Property Protection and Valuation,” Techpoint New-Economy New Rules Meeting, Indianapolis, IN, April 2005.

As a finance professional, Mr. Pellegrino served as a corporate finance officer for a software development company for five years. He peaked with responsibility for a \$7.2 million operating budget and the day-to-day operations of the company’s finance office.

As a valuation professional, Mr. Pellegrino has particular experience in the identification and valuation of application software embedded in capital equipment. The following is a sample list of the types of equipment that Mr. Pellegrino has evaluated for software content: telephone systems, networking switches, egg sorting equipment, DVD manufacturing equipment, medical imaging equipment, gasoline pumps, point-of-sale terminals, printing machines, packaging

sorters, automated vehicle systems, automated storage and retrieval systems, oscilloscopes, logic analyzers, spectrum analyzers, network analyzers, mainframe computers, large-scale storage systems, and CNC equipment.

Mr. Pellegrino has also experience valuing patents and other forms of intellectual property, business, human capital, training benefits, facility moves, capital purchase decisions, workforce restructurings, business process outsourcing, efficiency improvements, and process restructuring.

Mr. Pellegrino has completed both the 15-hour and 7-hour update USPAP training programs, is current with all USPAP training, has passed all required USPAP exams, and is a candidate member with the American Society of Appraisers. He has also completed numerous ICLEF and NBI seminars on property tax issues; he has counseled and testified before legislators about software valuation issues; and he was instrumental in helping to change Indiana law regarding the valuation of embedded application software for personal property tax reporting purposes. In addition, Mr. Pellegrino is a regular speaker on the tax effects of embedded application software and intellectual property and intangible valuation, and he has served as a judge for early-stage and high-tech business competitions since 2006.

Clients have used Mr. Pellegrino's valuations for internal capital budgeting and planning purposes, for property tax reporting purposes, for raising investment capital, and for economic feasibility analysis.

JEFF CHAMPA

Jeff Champa is a Senior Valuation Analyst at Pellegrino & Associates, LLC. He provides valuation consulting services and intangible asset appraisals for a variety of purposes. He also conducts project valuations and financial and market analyses. He specializes in embedded systems, signal processing, and software development. Past roles include system architect, system engineer, software engineer, and electrical engineer. Mr. Champa has managed full life cycle product development of embedded systems across a wide range of industries, such as automotive, agriculture, and construction. Mr. Champa is also a master with technical document creation. His extensive technical background makes him an ideal valuation analyst for embedded software and intellectual property valuations.

His strong engineering and software development background gave him the experience to provide onsite field support for the Navy. He was also instrumental in meeting functional requirements for the EOSS+ aboard the USS Abraham Lincoln. He has experience in design with central processing units (CPUs) from a variety of companies such as Hitachi and Infineon. In addition, he has experience with operating systems and network protocols and knowledge of commercial grade wireless communication systems and technologies. Mr. Champa also helps qualify products to industry standards.

Mr. Champa holds a Bachelor's degree in electrical engineering. He has also completed graduate courses in analog and digital communications and software design. Other achievements include coinventing a patent, publishing articles, and reviewing interactive code and design.

EMAD ISAAC

Emad Isaac is a Senior Valuation Analyst at Pellegrino & Associates, LLC. He provides financial analyses, product development insight, and valuation consulting services. Mr. Isaac brings to the company nearly 20 years of experience in product development in various roles: architecture, development, product management, and research. He has received numerous patents

for his ideas in the automotive and telematics fields. Past roles include chief technology officer, systems architect, distinguished member of technical staff, senior systems engineer, avionics systems engineer, and research engineer. Mr. Isaac's personal experience with the patent process, product development, and research methods brings valuable perception to the valuation process.

He has an extensive background in computer languages, operating systems, packages, and protocols. He wrote Product Description Documents for several programs for a global communications leader and directed all engineering efforts at an electronics manufacturing services company. He has been responsible for company strategic technical direction and vision and was instrumental in designing a multimillion-dollar technology and innovation center. In the intellectual property arena, he established an intellectual property review board and a corporate patent portfolio strategy, and was a member of a patent committee where he reviewed disclosure submissions and mentored junior engineers in the innovation process. As an inventor, he invented a control system for a variable nozzle turbine, a mathematical technique and algorithm for engine torque control, and an electronic control system for net torque calculation, among others.

Mr. Isaac holds two Bachelor's degrees: biomechanics and engineering. He also holds two Master's degrees: biomechanics and management. Mr. Isaac is an experienced public speaker, a telematics thought leader, and an advocate of education, serving on the board of directors for the Education Foundation of Downers Grove.

JILL STARBUCK

Jill Starbuck is a Senior Marketing Analyst and Technical Editor at Pellegrino & Associates, LLC. She has a Bachelor's degree in English from The Defiance College and a Master's degree in English from Indiana University Purdue University Fort Wayne. She also graduated from The Publishing Institute in Denver, CO.

As a research professional, Ms. Starbuck has directed focus groups, written qualitative reports, created telephone surveys, and conducted telephone interviews. Her market research experience has taken her to the international arena where she has managed complex research projects in the Asian, Latin American, and European markets.

Ms. Starbuck's research capabilities have landed her leadership roles in project management and have enabled her to build strong customer relationships. Her projects have included studies on blood pressure medicine, college curriculums, glucose monitors, and industrial directories. She was also the lead editor for market intelligence reports based on the automotive, banking, pharmaceutical, retail, and software industries. At Pellegrino & Associates, LLC, Ms. Starbuck performs market research for valuation projects, focusing on acquiring primary and secondary market research for the valuation analysts to integrate into final value opinions.

As a communication professional, Ms. Starbuck has extensive experience in editing, public speaking, researching, training, and writing. Her writing background includes analytical reports, brochures, catalog copy, manuals, newsletters, and technical documents. She has created and facilitated writing courses at the college and business levels. She also has developed house style guides and standard operating procedures.

Based on her editing abilities and attention to detail, Ms. Starbuck was recommended to The Publishing Institute where acceptance is limited and highly competitive. She is also frequently recommended by colleagues to companies and colleges to guide them in editing and writing processes.

POET COMMERCIAL LICENSING

INCOME VALUATION MODEL ODIS, INC.

VERSION 1.0

as of

December 1, 2010

ODIS, Inc. Confidential

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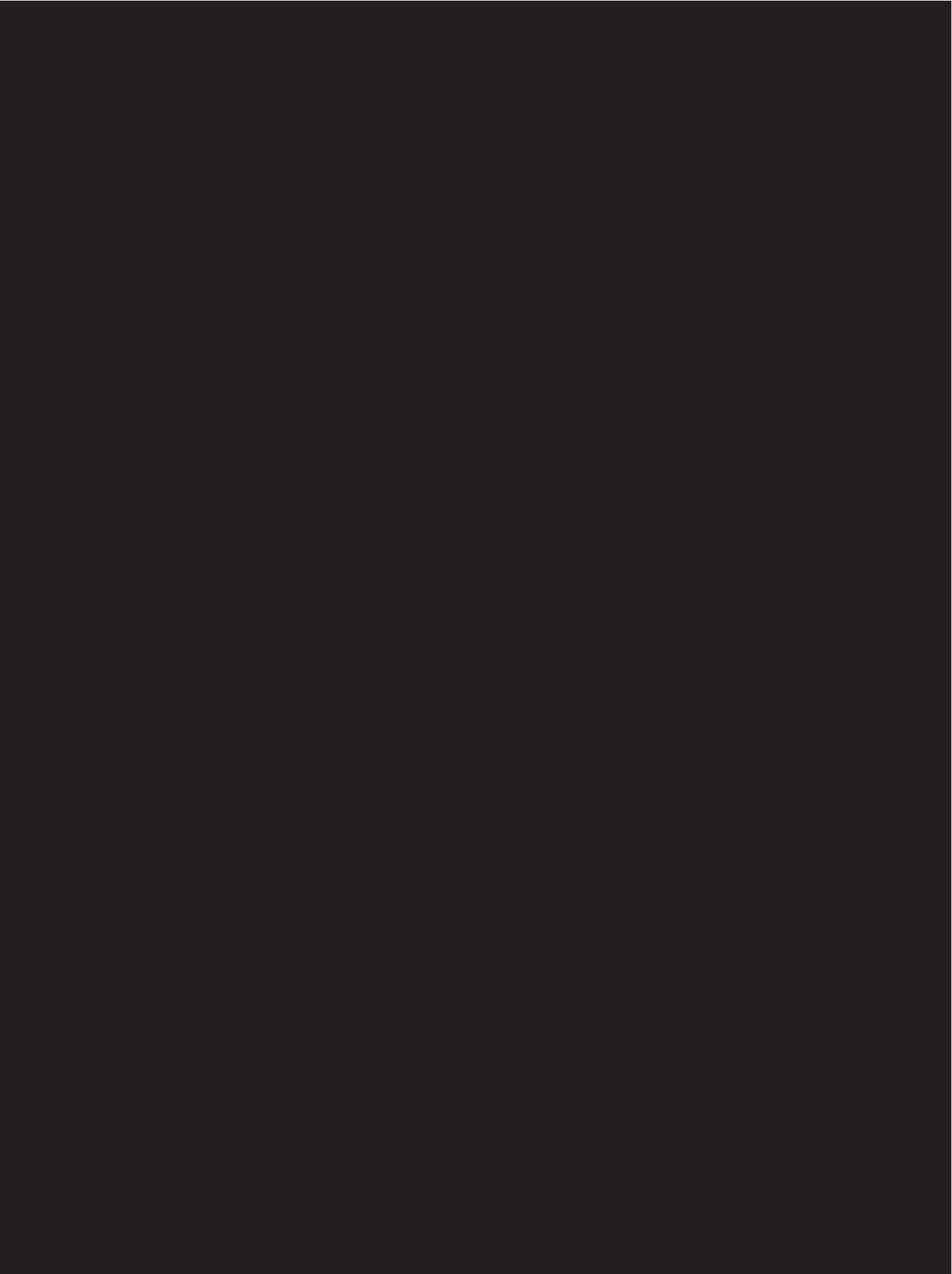
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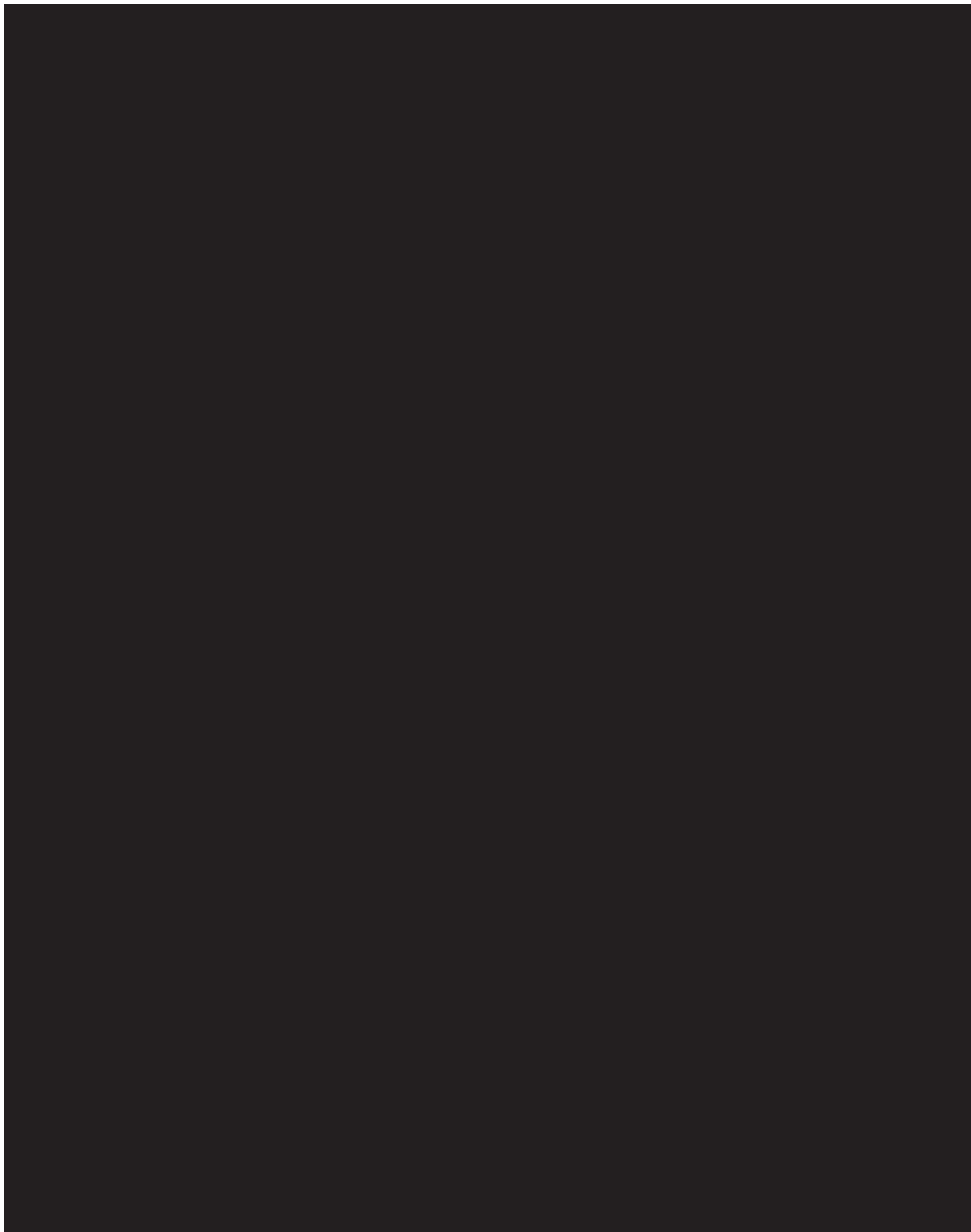












POET DEFENSE CONTRACTOR LICENSING

INCOME VALUATION MODEL ODIS, INC.

VERSION 1.0

as of

May 1, 2010

ODIS, Inc. Confidential

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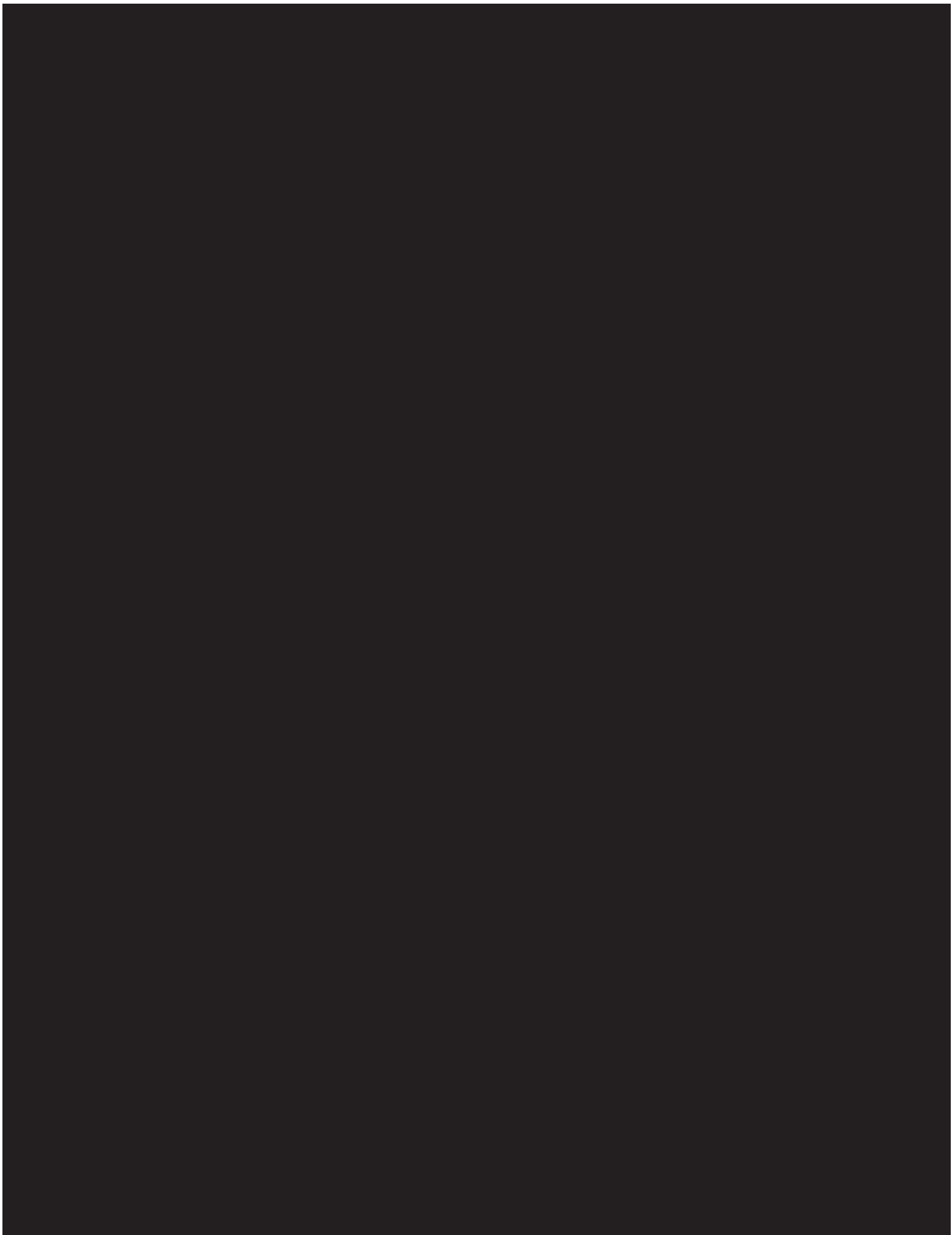
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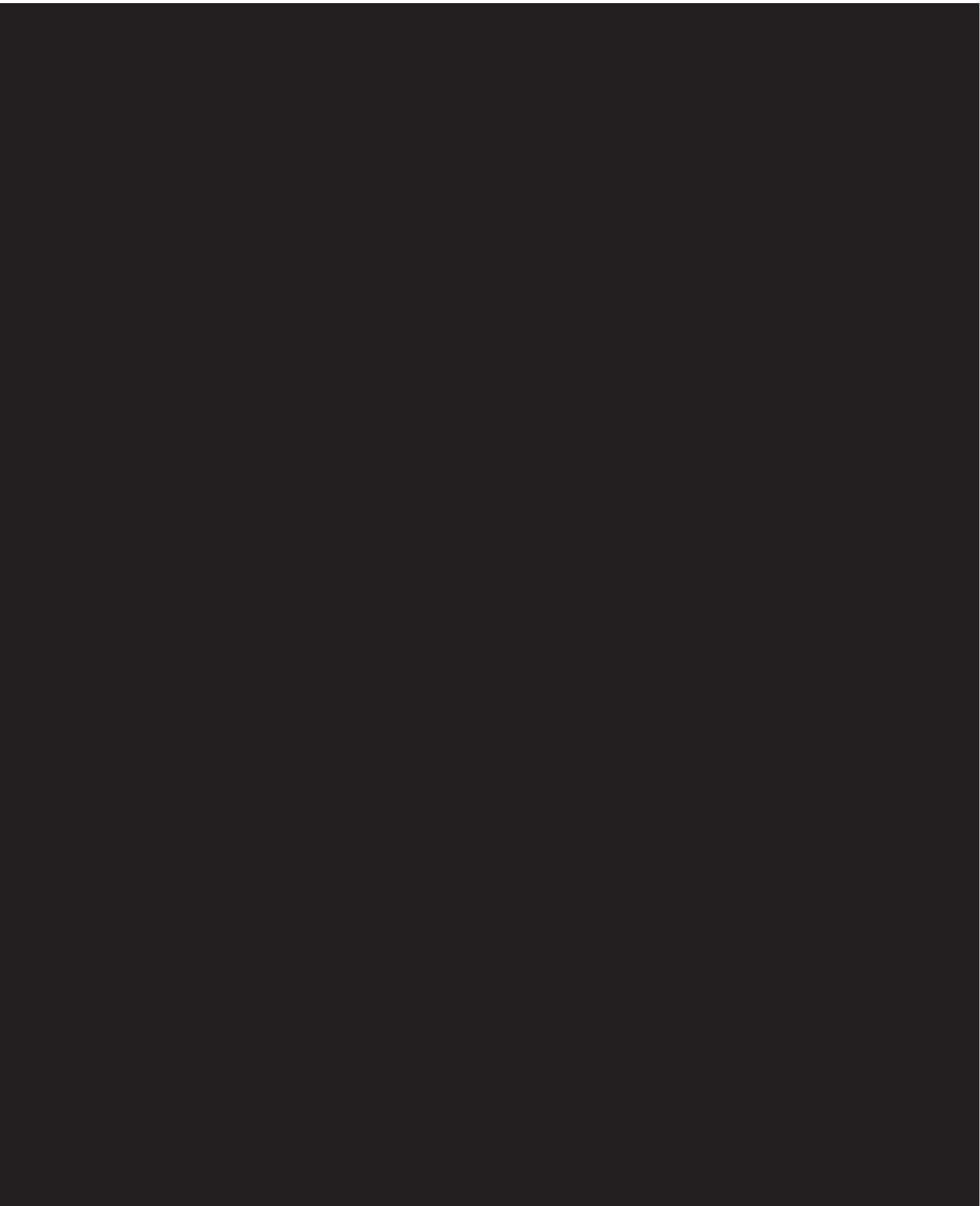
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POET SMARTPHONE LICENSING
INCOME VALUATION MODEL
ODIS, INC.
VERSION 1.0

as of

December 1, 2010

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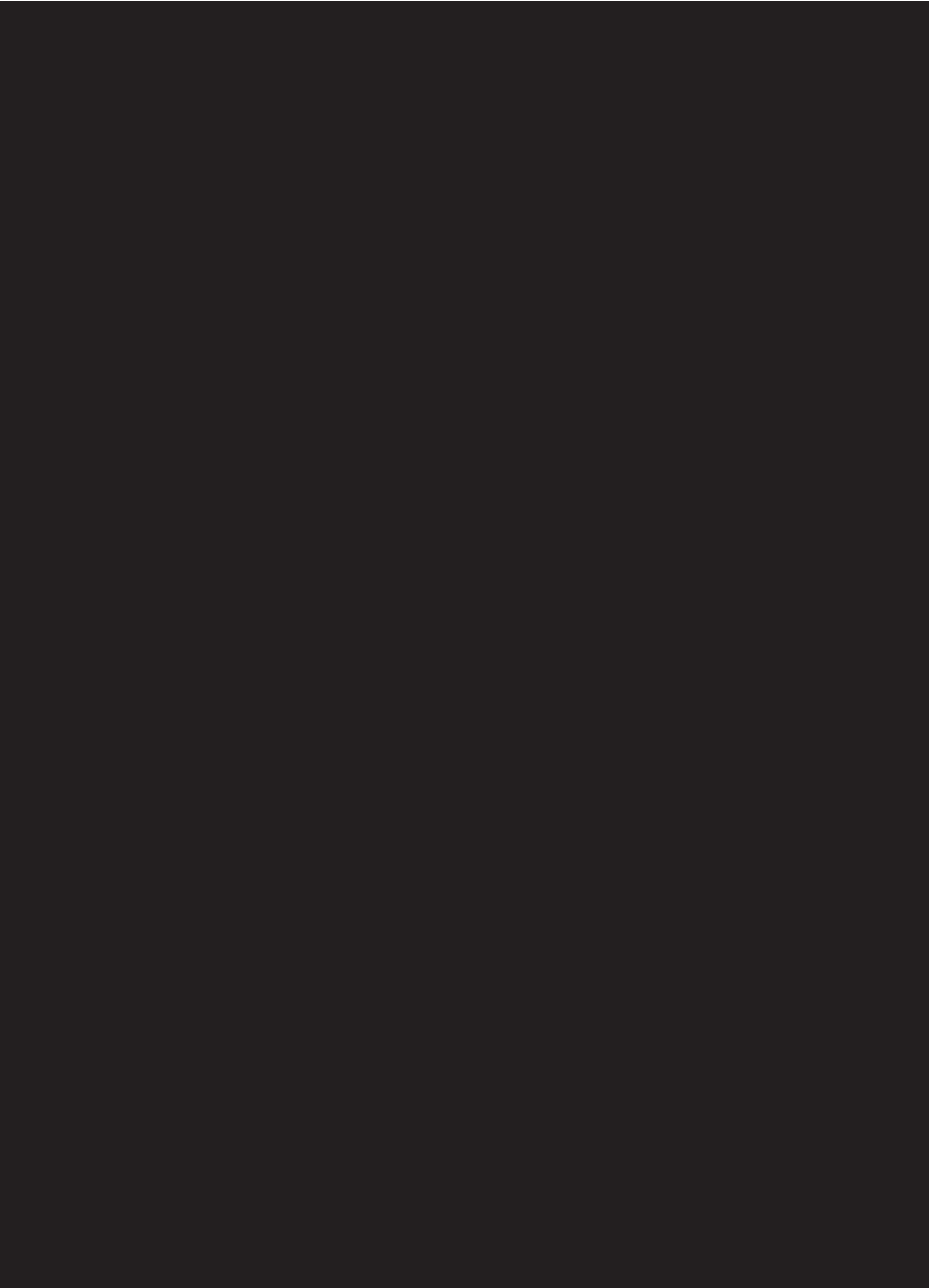
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The first part of the document discusses the importance of maintaining accurate records in a business setting. It highlights how proper record-keeping can help in decision-making, legal compliance, and financial management. The text emphasizes that records should be organized, up-to-date, and easily accessible.

Next, the document addresses the challenges of data management in the digital age. It notes that while digital storage offers convenience, it also introduces risks such as data loss, security breaches, and information overload. Solutions like cloud storage, encryption, and regular backups are suggested to mitigate these risks.

The third section focuses on the role of technology in streamlining business processes. It describes how automation and software tools can reduce manual errors, save time, and improve overall efficiency. Examples include using accounting software for invoicing and project management tools for task delegation.

Finally, the document concludes by stressing the need for continuous learning and adaptation. As technology and market conditions evolve, businesses must stay informed and be willing to adopt new practices to remain competitive and successful.

