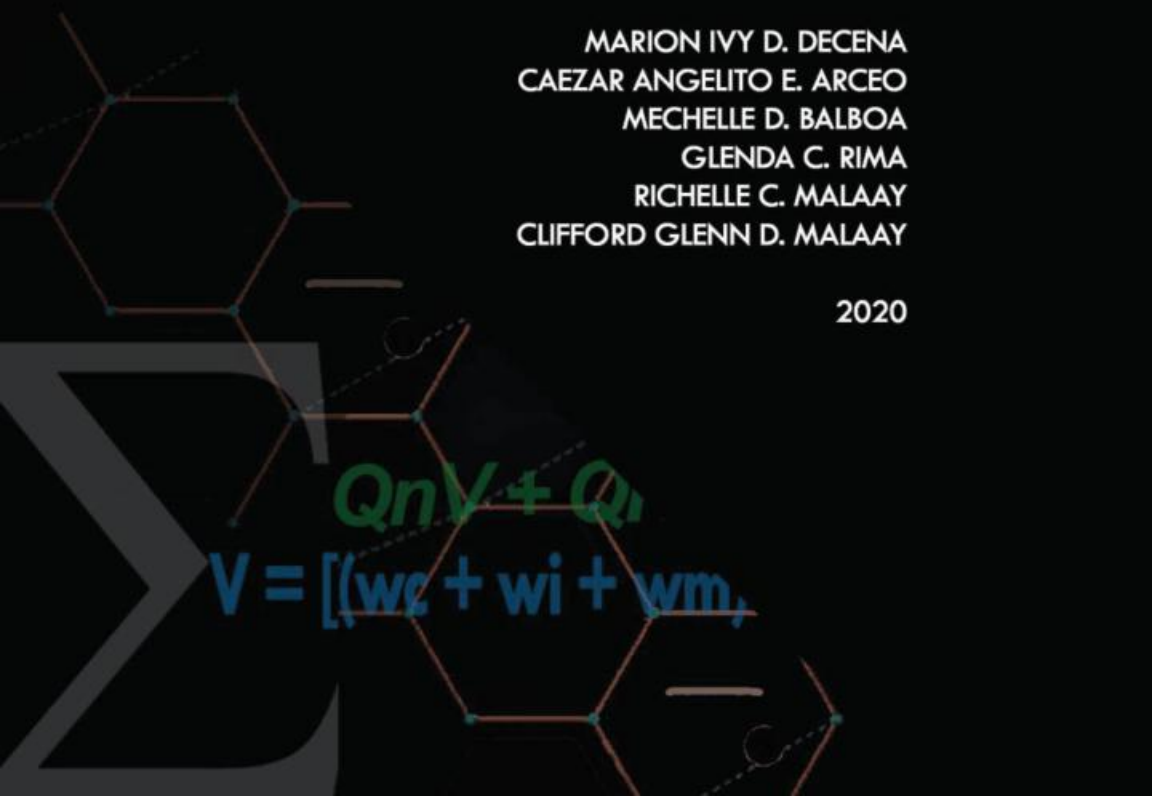


INTELLECTUAL PROPERTY (IP) VALUATION

M A N U A L

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CAEZAR ANGELITO E. ARCEO
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GLENDA C. RIMA
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2020

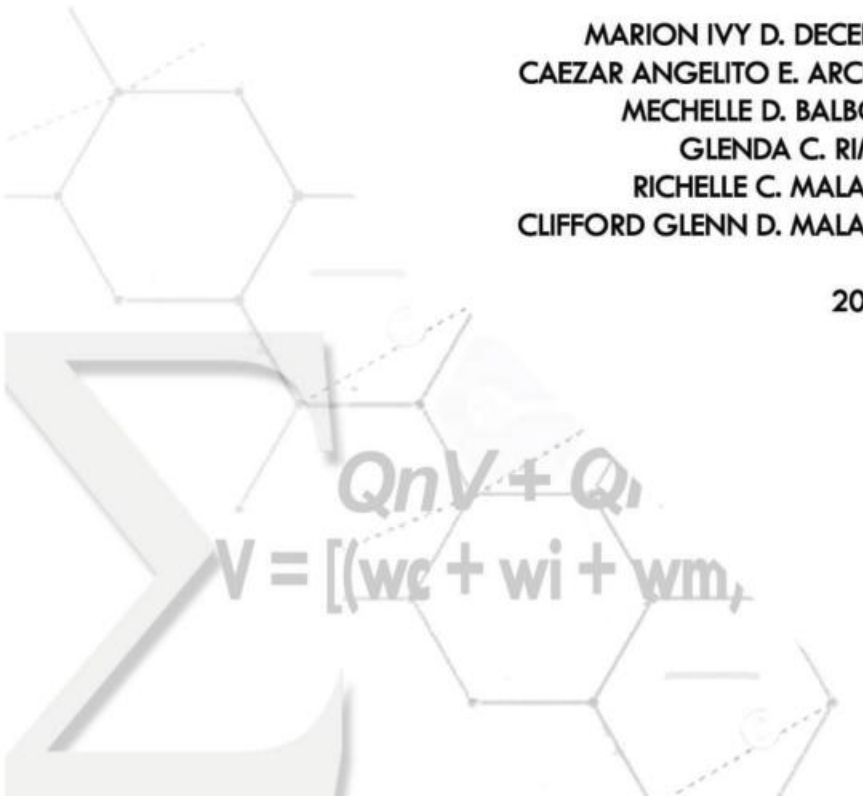

$$V = [(w_e + w_i + w_m) \cdot Q_n V + Q_i]$$

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Acknowledgement

In the labor of creating this manual, the authors utilized available technology references from a Research Development Institute (RDI) and State Universities and Colleges (SUCs), to simplify and interpret various topics. With this, the authors take immense pleasure and express their sincere gratitude to acknowledge colleagues and friends from the Metals Industry Research and Development Center (DOST-MIRDC), University of the Philippines – Manila (UPM), University of Santo Tomas (UST), and the University of the Philippines – Los Baños (UPLB), for allowing to use their DOST Councils-funded technologies that served as inspirations in developing cases for this manual.

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The findings, interpretations, and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the Department of Science and Technology (DOST) in general, of the Technology Application and Promotion Institute (DOST-TAPI) in particular, or of any other entity they would represent.

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ABOUT THE COVER

Our cover depicts the challenges that the Philippines face in commercializing locally developed technologies, where the value of the technology in general, and the intellectual properties (IP) protecting the features in particular, are of utmost importance to create a leverage during pitching and negotiations. The black background reflects the vast opportunities to professionalize the IP valuation practice in the country, while the embossed abstract figures suggest the complexity of valuing intangible properties, in particular patents and other IPs, that were being unveiled and demystified in this manual.

Cover design by Ms. Maricon R. Avila and Mr. Jomari J. Lasay
Taguig City, Philippines

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PREFACE

Intellectual Property (IP) is a central element establishing value and potential growth of technology and crucial component in commercialization and innovation. IP assets include patents, utility models, trademarks, industrial designs, copyrights, and prototypes. Hence, the value of asset changes and could not just be determined; it is also imperative to take advantage of and could contribute to the country's economic growth.

As the IP valuation begins to be recognized as a means to efficiently translate results of government-funded research and development (R&Ds) into useful products and services; the current system of technology-transfer is characterized by a lack of standardized policy on technology transfer and lack of well-defined IP valuation protocol.

In order to understand the importance of intellectual property (IP) valuation, the authors of this manual envisioned to provide a brief and simplified explanation of the mechanism on how IP valuation works, how it can be valued, and why it is essential to come up with a uniform approach. Furthermore, this manual also aims to facilitate the preparation of a fairness opinion report (FOR) which is also a crucial element in technology commercialization. Moreover, it is vital for IP to be correctly valued in order to value a business correctly; to leverage in the negotiation for commercialization and securing FOR.

However, this manual was originally developed in rendering thesis opinion for the Fairness Opinion Board (FOB) use and not intended for recommendation.

Finally, this handbook is prepared particularly for all the researchers, technology transfer professionals, valuers, technology licensing officers, business development officers, financial managers, and actors in technology transfer and commercialization as a reference on why IP has value, how it works and why it is important to develop an IP valuation mechanism.

CHAPTER I INTRODUCTION

Intellectual Property (IP) like any other ordinary asset can be a source of revenue, money and/or capital to the business. In fact, in the accounting parlance, intangible assets such as invention patents, utility models (UMs), trademarks, copyrights, industrial designs and the like are considered as identifiable¹ monetary assets without physical substance and can only be recognized as such when it is probable that future economic benefits related to the intangible asset will flow in the entity and the cost of the intangible asset can be measured reliably.

The use of IP asset as collateral to secure a loan from any financial institution is perhaps the best way to illustrate how economic value can be derived from it or how valuable these intangible assets can be. Ordinarily, most venture capitalists invest in IP that is already earning royalties. These royalty payments are the means for the debtor/licensor to repay the loan. The risk of default is lowered with the consistent source of cash flow from royalty revenues hence IP as collateral can be a feasible alternative to secure obligations from financial institutions.

*IP asset
as
collateral
to
secure
a loan
from
any
financial
institution*

The clamor for banks and other financial institutions to recognize the value of IP particularly in neighboring countries in the Asia-Pacific Region has been increasing in the past years. Recently, Thailand has enacted the Secured Transaction Act of 2015² to promote the use of IP as loan collateral. The new law allows borrowers to tender more diverse kinds of assets, including IP as collateral, without having to deliver the assets to the lenders.

¹ Philippine Accounting Standards No. 38.

² <http://www.ip-watch.org/2016/08/18/thailand-new-law-promotes-ip-as-loan-collateral-amended-trademark-law-raises-penalty-for-deception/>.

Also in 2014, Singapore announced a new financing scheme³ aimed at helping local businesses secure bank loans by using patents as collateral. Two years after the S\$100m Intellectual Property Financing Scheme (IPFS) was launched, the IP Office of Singapore (IPOS) said that the IPFS disbursed its first loan⁴ backed by patents to a Singapore-owned footwear Masai Group International and was supported by DBS Bank.

The Philippines is not far behind these countries in recognizing the value of IPs. In fact, in the late 1990s, the Technology Application and Promotion Institute (TAPI), a line agency of the Department of Science and Technology (DOST) authorized the use of utility model registration as a form of collateral for the release loans under the Invention Guarantee Fund (IGF). Under Republic Act No. 7459, otherwise known as the "Inventors and Inventions Incentives Act of the Philippines," the IGF deposited with the Development Bank of the Philippines (DBP) is used to finance the commercialization of patented Filipino inventions. The DBP released its first-ever loan in the amount of ₱1,604,996.08 under this program partly secured by the inventor's UM registration for a technology called "Anti-Gas Leak Safety."⁵ Unfortunately, said financing scheme was discontinued when the implementing rules and regulations of RA 7459 was amended in 2005.⁶

Nevertheless, on 17 August 2018, President Rodrigo Roa Duterte signed into law Republic Act No. 11057 also known as the "Personal Property Security Act," which aims to give micro, small and medium enterprises (MSMEs) better access to financing. The new law expands the list of assets acceptable to banks and other financial institutions as collateral. At present, some financial

³ <http://www.asiaiplaw.com/article/41/1817/>.

⁴ <https://www.channelnewsasia.com/news/singapore/singapore-approves-first-loan-application-using-ip-collateral-7966928>.

⁵ *This project is under DOST-TAPI financial assistance under the Invention Guarantee Fund (IGF).*

⁶ *Section 6 of IRR of RA 7459 as amended.*

institutions prefer land and other real property assets as collateral, which make it hard for small entrepreneurs to avail of loans. Director General Josephine R. Santiago of the Intellectual Property of the Philippines cited that lawmakers view RA 11057 would “broaden the utilization of ‘movable assets,’ like bank accounts, accounts receivable, inventory, equipment, vehicles, agricultural products, and even IP rights,” to provide better access to financing business ventures.⁷

With these recent developments, the need for owners of IP to be enlightened even more as to how IP can be valued and the importance to come up with an IP valuation mechanism that is verifiable, reliable and acceptable have become paramount. However, given the various limitations and issues that confront IP holders, technology transfer officers, government officials and policymakers particularly the lack of information to benchmark prices of IP assets, royalty rates, lack of knowledge and skills to perform in-house valuation and the very high cost of IP asset valuation when contracted out to professional firms, have led them to rely on research and development (R&D) costs incurred just to put a price to the value of their IP. While this approach may likely be appropriate to a particular technology, this will not necessarily give an accurate value of other technologies.

This Manual seeks to provide the valuers of IP the basic knowledge and approaches to the valuation of IPs for government-funded R&D projects for their use in negotiating the agreements for commercialization.

⁷ *The Director General speech during the Mandatory Continuing Legal Education for Lawyers and IP Practitioners on September 13, 2018 at Shangri-La at The Fort Manila, Taguig City entitled “International Aspects of IP: The Philippine Experience”.*

A. WHAT IS IP VALUATION?

Before we define IP valuation, it is important to know first the meaning of valuation. Valuation is the act of appraising or assessing the estimated value of a thing in a certain place taking into consideration the particular circumstances at a particular time. Valuation brings together the economic concept of the value and the legal concept of a property.

Valuation is the act of appraising or assessing the estimated value

According to Lord Kelvin,⁸ valuation will enhance our knowledge of IP if we will provide a common set of methods to capture and describe the business, legal and financial aspects of intangible assets in question. These methods may differ in their application and even the terminology used in these fields but the underlying valuation methods bear striking similarities. Valuation approaches reduce the complexity of putting a price on the IP and helps shed light on key management issues.

In valuation, it is important to know first the difference between tangible and intangible assets. Below is a table differentiating the two assets⁹:

Criteria	Tangible Asset	Intangible Asset
As to its form	Physical Item	Non-physical item
As to its quantification	Measurable	Cannot be measured instantly
As to assessment of value	Easy to assess value by mere perception	Difficult to assign value
As to the life of the asset	Can be either short term or long term asset	Long term asset

⁸http://www.wipo.int/export/sites/www/sme/en/documents/pdf/IP_Valuation.pdf

⁹ www.investopedia.com/ask/answers/012815/what-difference-between-tangible-and-intangible-assets.asp.

Intangible assets do not take physical form since these lack physical shape and substance but their existence can be demonstrated to the effect of increasing business value. Tangible assets are measurable due to its physical attribute, are easy to assess and can be either short term or long term. These types of assets include all properties that are tangible and palpable but are not limited to machineries, equipment, vehicles, land, and buildings. Intangible assets, on the other hand, have either a definite or indefinite life span depending on the type of asset. Examples of intangible assets include goodwill, intellectual property, brand names, customer relationships, contracts and non-compete agreements.¹⁰

Tangible assets are easier to appraise because their price is usually identifiable and available in the market. Tangible assets are the most utilized assets in the regular course of business since they are easier to use for negotiations and their value is more precise.

Tangible and intangible assets are similar in the sense that both have certain property rights and attributes that create value for their owners.

Thus, when we are talking about IP matters, we are dealing with intangible asset because the valuation of IP is similar to the valuation of an intangible asset. **IP Valuation** then is the act of determining the value of intangible assets (Intellectual Property) in order to come up with value concepts depending on one's purpose like economic value, owners' value, market value, tax value, among others. This will help the owner of the IP use, protect, sell, leverage, insure, or exchange the IP asset in the most cost effective way.

¹⁰ <https://www.pcg-services.com/difference-tangible-intangible-assets-business-valuation/amp/>.

The role of intangible asset (and more particularly, IP) in business is insufficiently understood due to its complexity. Often, IPs are under-valued, under-managed and under-exploited. It is really important to know the value of IPs as much as one knows the value of tangible assets.

B. WHY VALUE IP?

There are so many reasons why IPs should be valued but these can be summarized in three words: “intelligent business decision.” Specifically, the following can serve as motivation to value IPs that will yield the most favorable outcome or result to the actors and minimize risks.

1. As a Transaction Strategy

Transaction strategy is being used in valuing IP when one considers buying, selling or transferring the asset in a licensing arrangement or acquisition. Usually, the objective of the transaction strategy is a ‘go versus no go’ recommendation. That is, “At what price am I willing to enter into this proposed transaction?”¹¹

For example, if A would like to sell or enter into a licensing agreement for his “improved biogas digester” technology, he should appraise the estimated cost he invested in raw materials, labor and overhead in order to come up with the most effective price.

2. Financial Reporting

On the other hand, if B in our previous example is a businessman with a company, reporting on public financial statements is necessary and, therefore, valuing his IP will be

¹¹ www.wipo.int/sme/en/documents/ip_valuation_fulltext.html.

very important for financial reporting. Some regulations specify the valuation, amortization, and reporting of goodwill and other intangible assets. The end deliverable is usually a report specifying the value and change in value of the subject assets.¹²

3. Litigation

Valuation of IP is necessary also in infringement cases. For instance, if C is selling the product of B above without his consent, an infringement case can be brought by B against C in court. Thus, in awarding damages, valuation of B's IP will be needed to determine the amount of the judgement.

4. Bankruptcy

If B's company goes bankrupt and rehabilitation or liquidation has to take place, often the most valuable assets remaining are IP-related. IP valuation will then be required by the court to properly rehabilitate the company or dispose the assets for liquidation.

5. Financing/Security

Following the above examples, if B likes to exploit his IP and intends to increase the activity related to it, he may enter into securitization and financing of his IP assets. Securitization means using IP asset as collateral to secure a loan or financial obligation.¹³ This can be achieved through a number of ways, including borrowing against the license stream (similar to factoring) or securitization of IP. License stream or factoring is one who acts or transacts business for

¹²IAS 38 – Intangible Assets. Retrieved from <https://www.iasplus.com/en/standards/ias/ias38>.

¹³Supra Notes 1-4.

another such as broker or one that lends money to producers and dealers (as on the security of accounts receivable)¹⁴

6. Tax

Since IP assets are considered intangible assets, then valuation is necessary for tax planning and compliance. These include charitable donations of IP, the sale or license of IP across tax jurisdictions (inter-company pricing), taxable reorganizations, goodwill allocations, built-in gains among other areas.¹⁵

C. WHEN TO VALUE IP?

Valuation of IP becomes even more important at the time the product or technology is ready for commercialization

Valuation of IP becomes even more important at the time the product or technology is ready for commercialization. But for purposes of entering into a licensing agreement, the technology owner needs to value the technology created as a whole in order to have a leverage in negotiating the agreement for commercialization.

At the onset, the licensor may have to think about what to receive for the license. He may consider equity or royalties or both.

According to Philip Mendes,¹⁶ US universities insist on royalty and other license payments because equity can be reduced to become worthless while royalties cannot be diluted.¹⁷

¹⁴Merriam-Webster- Meaning of factoring

¹⁵National Internal Revenue Code of 1997. Retrieved from <https://www.bir.gov.ph/index.php/tax-code.html#title2>.

¹⁶Training on Setting Royalty Rates and Other Financial Terms on December 05-06, 2017 in B Hotel, Alabang.

¹⁷Investopedia defines "dilution" as a result of a reduction in the ownership percentage of a company or shares of stock due to the issuance of new equity share by the company.

D. WHO CAN VALUE IP?

While the IP holder is primarily responsible in determining the initial value of the subject IP not only because he owns the technology but also because he has all the documents and records during and after the development of the technology or product, he is usually not in the best position to objectively value his IP. In fact, this can be likened to an ideal mother who would always say good things about her children, or would always find a way to justify criticism. Unless this perceived bias can be remedied by the IP holder, in particular an R&D institute or an academic institution, valuation of the IP assets can be best done by a third party.

IP valuation is ideally performed by a multi-disciplinary team. Important skills in the team are patenting background and financial capabilities, aside from other experiences that will contribute to the expected output, such as market research, technical and engineering expertise, among a few.

Patents that form part of the IP subject of valuation are defined by their claims where the actual coverage of protection actually lies. A patent agent or patent attorney can best interpret whether the patent is worth acquiring, and up to what extent the patents can be beneficial to the acquirer (i.e., reverse engineering, narrowness or broadness of protection, infringement-related factors). If this skill set is lacking in the team, then the valuation report can only be named as a mere technology valuation report.

A financial specialist shall determine, as the specialization identifies, the financial value of the IP, and more particularly the patents that are part of the portfolio. This includes analysis of financial forecasts, ratios, reports and prevailing rates of return. Ideally, this specialize should be a Certified Public Accountant (CPA) who actually accounts the value of all tangible and intangible assets of an agency or company.

Market research can be best performed by a team of specialists who are trained to assess the competitiveness of the product through various tools, such as testing consumer perception, analyzing market share, simulating conditions and environmental scanning, analyzing consumer behavior, among a few. Income can be best projected if the most number of possible information is available.

The technical aspects of technology are best identified and assessed by a team of engineers and product designers, especially if there is already an urgent need to determine whether a particular IP subject of valuation can be really useful for acquisition. The engineers determine the viability and the ability to integrate such technology in an existing production facility. The products and machines are designed based on varying conditions in collaboration with other specialists. Assessing the usability of the technical features of the technology in general, and of the patent in particular, may also have some surprising uses to the value of the patent.

In the absence of this “Dream Team,” the valuator must be equipped with the combination of the above competencies in order to at least arrive at values that can be deemed acceptable to the client. The authors fully understand that the Research and Development Institutions (RDIs) in the Philippines presently have limited personnel, such as normally having barely one or two officials or employees to comprise their technology licensing office (TLO), and this is the motivation why and how this Manual is written.

CHAPTER II

THE FIVE P'S OF IP VALUATION

As discussed in the previous chapter, intellectual property (IP)¹⁸ valuation is ideally performed by a multi-disciplinary team which we call as our “dream team.” It is essential that the skills of the members of this team are put to use in order to effectively package the initial inputs for valuation, whether such a dream team actually exists in the setting of an RDI or a university or in a mere individual performing all of these functions. If the valuation is done by an individual in the absence of such a dream team, the valuator must be equipped with at least competencies in patent prosecution, financial and business analysis, and the technology subject of the valuation in order to arrive at verifiable values that can be used by the RDI or Higher Education Institute (HEI) for its technology transfer initiatives. The authors fully understand that the RDIs and HEIs in the Philippines presently have limited personnel, such as normally having barely one or two officials or employees to comprise their technology licensing office (TLO),¹⁹ and this is the motivation why and how this Chapter is written.

An extensive amount of detail and analysis is required in order to prepare a good IP valuation report. There is no easy route

...valuation is ideally performed by a multi-disciplinary team which we call as our “dreamteam”

¹⁸ *The Amended Implementing Rules and Regulations (AIRR) of Republic Act No. 10055, otherwise known as the “Philippine Technology Transfer Act of 2009” uses the term “Intellectual Property” to describe intangible assets resulting from the creative work of an individual or organization. IP, under RA 10055, also refers to creations of the mind, such as inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. IP can also refer to future tangible and/or intangible assets that may be recognized as intellectual property. See AIRR, Chapter I, Rule 3 (k).*

¹⁹ *TLOs are named differently from one RDI to another, or from one unit to another in each of the RDIs, such as: knowledge transfer office; technology transfer office; business development office; or innovation and technology support office (ITSO), a franchise of the Intellectual Property Office of the Philippines. No matter how they are called, they still function similarly and may be lodged with the duties of valuing the RDI's IP assets.*

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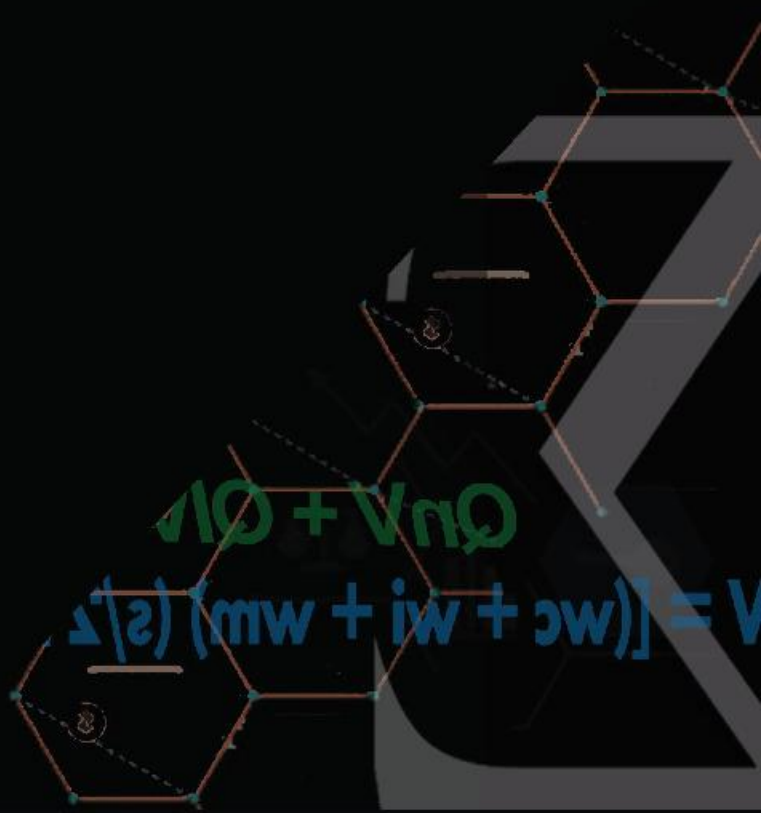
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$$Q_{11}V + Q_{12}Q$$

$$V = [(w_c + w_i + w_m)(s/\Delta)] = V$$