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| MINISTRY OF EDUCATION AND TRAINING  **VIETNAMESE – GERMAN UNIVERSITY** | **SOCIALIST REPUBLIC OF VIETNAM**  **Independent - Freedom - Happiness** |

*Binh Duong, 2019*

**CONTRACT FOR IMPLEMENTATION**

**OF STUDENT RESEARCH PROJECT**

*(No: 2019. SV/HĐNCKH-VGU)*

* Based on Civil Code No. 91/2015/QH13 of November 24, 2015;
* Pursuant to Joint Circular No. 27/2015/TTLT-BKHCN-BTC dated 30/12/2015 of Ministry of Science and Technology and Ministry of Finance on on provision of fixed funding to science and technology tasks funded by the Governmental budget;
* Pursuant to Circular No. 19/2012 / TT-BGDĐT dated 01/06/2012 of the Minister of Education and Training on Regulations for scientific research activities of students in higher education institutions;
* Pursuant to Decision No. 1196/QĐ-TTg dated 1 September, 2008 of the Prime Minister on the establishment of Vietnamese-German University;
* Pursuant to Decision No. 890/QĐ-TTg dated 19 June, 2016 of the Prime Minister on “Promulgating charter on VGU organization and operation”;
* Pursuant to Decision No. 192/QĐ-ĐHVĐ dated 22 June, 2017 of the President of Vietnamese – German University on issuing regulation on Management of Scientific and Technological activities at VGU;
* Pursuant to Decision No. 50/QĐ-ĐHVĐ dated 25 February 2019 of the President of Vietnamese – German University on establishment of evaluation committee for the student project 2019 and the result of evaluation meeting;
* Based on the proposal of Research Management Department,

**Party A: Vietnamese German University**

Address: ​Le Lai Street, Hoa Phu ward, Thu Dau Mot City, Binh Duong Province

Tel: +84- (0)274 2220990 Fax:  +84- (0)274 2220980

Account number: 3714.0.1023505 State Treasury in Ho Chi Minh City

Tax code: 0309102769; Budget Code: 1023505

Representative: Mr. Pham Van Song, Vice President

**Party B: Mr. Vo Bich Hien**

Place of work: Vietnamese – German University

Position: Lecturer - Faculty of Engineering

Temporary resident card number: BU024227 Dated: 27/02/2019

At: Bình Dương

Personal tax number: Dr. Hien personal tax number

Account owner: Võ Bích Hiển

Account number: 0281000479303

Bank: Vietcombank

Branch: Bình Dương

**Student group:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Full name | Class | Student ID | ID |
| 1 | Nguyễn Văn Hóa Vũ | MSST 2018 | 14979 | 312220908 |
| 2 | Trần Anh Khoa | ME 2015 | 9908 | 079097007961 |
| 3 | Võ Thành Đạt | ME 2015 | 9781 | 025628642 |
| 4 | Nguyễn Minh Dũng | ME 2017 | 13482 | 026058614 |

Represented by: Nguyễn Văn Hóa Vũ

Phone: 0932 932 121

Email: 14979@student.vgu.edu.vn

Have agreed that:

**Article 1:** Party B works on the project (proposal attached) titled: “**Satellite ground station using software-defined radio**” funded by party A.

Time line of the Project: 12 months (01/10/2018 – 01/10/2019)

**Article 2:** **Party B delivers to party A the product(s) described as follows:**

|  |  |  |
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|  | Description | Criteria/Deliverable |
| Hardware | Two axes rotational system with universal mount for satellite tracking purpose and its controller working in both manual and automatic mode | . Mechanical frame  . Two axes with accuracy ±5 degrees and speed of 1 degree/second in minimum  . Have ability to be mounted:  + Parabolic antenna: 3m diameter, 20kg  + Two Yagi antennas: 0.5m x 0.5m x 2m, 5kg  . Wide range working frequency based on capacity of the used SDR (USRP B210: 70Mhz to 6Ghz) |
| Software | A program interfacing with SDR for frequency switching and signal processing | . Software to control the azimuth and elevation axis manually by tuning gauge in user interface.  . Software has availability to track the LEO satellite automatically.  . Software can interface with SDR, tuning frequencies.  . Software can receive the beacon signal and un-decoded downlink data. |
| Paper |  | Paper about Satellite ground station using SDR. |

**The deadline of delivering the product is: 10/10/2019**

**Article 3: Contract value and payment methods:**

**3.1 Contract value**: 19.800.000 VND (In words: *Nineteen million eight hundred thousand VND)*

**3.2 Payment method**: Party A will transfer to party B through the account of the instructor. Payment is divided into two phases:

- Phase 1: Party A pays in advanced to Party B 50% of the contract which is: 9,900,000 VND (*nine million nine hundred thousand VND*) value after the contract is signed

- Phase 2: Party A shall pay to Party B the remaining value of the contract according to the actual cost arising from the date Party A receives the finished product mentioned in Article 2 with the following documents:

+ The results of product acceptance committee from "qualified" or more.

+ Minutes of contract liquidation acceptance signed by both parties.

+ A valid financial invoice for the list of goods to be procured for the implementation of the project.

**3.3 Implementation methods**: package expenditure

**Article 4: Responsibilities of the two parties:**

**4.1** **Responsibilities of Party B:**

+ The supervisor is responsible for managing the project, instructing the students to carry out the work and hand over the product on time, ensuring to meet product requirements stated in Article 1

+ The supervisor is responsible for financial management of the project, assisting students to carry out advance payment procedures, payment and settlement with Finance and Accounting Department after the project is finalized.

+ Party B must use the funding appropriately according to Vietnamese Government regulations and the VGU regulations.

+ Report on progress of the project as requested by party A.

**4.2 Responsibilities of Party A:**

Provide Party B with all necessary information related to contract implementation and pay to Party B in accordance with Article 2 of this contract.

**Article 5:** If any commercialization of this research could be realized, Party A will help to facilitate the paper works with the assistance of Party B. The shared benefits (if any) will be discussed in details in other contracts.

**Article 6:** The contract will come into effect from the date signed by both parties. It is made into 5 original copies: 02 for Party B and 03 for party A with the same legal value.

**Party A Party B**

Team leader Supervisor

**Pham Van Song Nguyen Van Hoa Vu Vo Bich Hien**