

# Patent Processes for Innovators: Domestic, U.S., and EU Frameworks

## Why Bangladeshi Innovators Need to Understand International Patent Systems

1. **Global Market Access:** Protect innovations in export markets like the U.S. or EU.
2. **Attracting Foreign Investment:** Patents signal technical credibility to international investors.
3. **TRIPS Compliance:** Bangladesh must align with global IP standards by 2026 post-LDC graduation.
4. **Defensive Strategy:** Prevent patent trolls or competitors from blocking access to foreign markets.
5. **Software Innovations:** U.S./EU frameworks offer clearer pathways for tech inventions compared to Bangladesh's evolving system.

## I. Patent Process in Bangladesh

*Governing Law:* **Bangladesh Patent Act 2022** (replacing the 1911 Act).

### Step 1: Prepare the Application

1. **Complete the prescribed form:** Use Form PA-1 (Patent Application) from the Department of Patents, Designs, and Trademarks (DPDT).
2. **Attach the complete specification**, including:
  - **Title of the invention:** A concise and specific name (e.g., "Automated Irrigation System Using Soil Moisture Sensors").
  - **Clear description:** Detailed explanation of the invention's purpose, components, and operation.
  - **Claims:** Define the scope of legal protection (up to 10 claims included in the base fee).
  - **Summary:** A 300-word overview of the technical solution and its benefits.
  - **Pre-emption rights:** Disclose any existing rights or prior agreements related to the invention.

### Step 2: Submit the Application

1. **File with DPDT:** Submit the application to the **Registrar of Patents** at DPDT's office in Dhaka (in person or by post).
2. **Pay the prescribed fee:**

- **Ordinary application:** ₳15,000 (for individuals) or ₳30,000 (for companies) for up to 25 pages and 10 claims.
- **Additional fees:** ₳200 per extra page or ₳100 per additional claim.
- 3. **Include drawings:** Attach technical diagrams on A4-sized tracing paper (with a duplicate photocopy).

## Step 3: Initial Assessment

- The Registrar checks for:
  - Completed forms and signatures.
  - Correct categorization (e.g., mechanical, software, or chemical).
  - Compliance with formal requirements.
- Incomplete applications receive a **30-day notice** for amendments.

## Step 4: Technical Evaluation

- The Registrar verifies if the invention is:
  - **Reproducible:** A person skilled in the field can replicate it without further experimentation.
  - **Clearly defined:** No ambiguity in the description or claims.
- Failures result in a request for clarifications or revisions.

## Step 5: Examination

- **Automatic substantive examination:** Conducted to assess:
  - **Novelty:** Comparison with global prior art (patents, journals, etc.).
  - **Inventiveness:** Non-obviousness to experts in the relevant field.
  - **Industrial applicability:** Practical use in sectors like agriculture, healthcare, or IT.
- Applicants receive an examination report within **18–24 months**.

## Step 6: Acceptance and Advertisement

- If approved:
  - The Registrar publishes the patent in the *Bangladesh Patent Journal*.
  - The application and drawings become publicly accessible for review.

## Step 7: Opposition Period

- **4-month window:** Third parties (e.g., competitors) can challenge the patent's validity.
- Common grounds for opposition include:
  - Lack of novelty.
  - Prior public disclosure.
  - Ownership disputes.

## Step 8: Grant and Sealing

- If no opposition succeeds:
  - Pay a **sealing fee** of ₳3,000.
  - The patent is granted and stamped with DPDT's official seal.
- The patent certificate is issued within **1–2 months**.

## Step 9: Maintain the Patent

- **Term:** 20 years from the filing date.
- **Renewal fees:**
  - First renewal after **4 years:** ₳1,500.
  - Subsequent renewals annually until the **20th year** (fees increase incrementally).
- Late payments allowed within a **6-month grace period** with penalties.

## Additional Requirements for Foreign Applicants

1. **Local representation:** File through a registered Bangladeshi law firm.
2. **Power of Attorney:** Submit a notarized authorization for the local agent.
3. **Priority documents:** If claiming priority under the Paris Convention, provide certified copies of foreign filings within **12 months**.

## Key Notes

- **Software patents:** Only granted if linked to hardware (e.g., embedded systems in medical devices).
- **Public disclosure:** Avoid publishing details before filing to protect novelty.
- **Cost-saving tip:** Use DPDT's **provisional application** (₳1,000) to secure a priority date while refining the invention.

For the latest updates, visit DPDT's official portal: <http://www.dpd.gov.bd>.

## II. U.S. Patent Process for Bangladeshis

*Governing Law:* **35 U.S. Code** (U.S. Patent Act).

### Step 1: Provisional Application (Optional)

- **Purpose:** Secure a priority date (12-month window for non-provisional filing).
- **Cost:** \$130–\$300 (micro-entity discounts available).

### Step 2: Non-Provisional Application

- **Requirements:**
  - Detailed specification, claims (U.S.-style drafting), abstract (≤150 words).
  - Oath/Declaration signed by all inventors.

- **Filing:** Use USPTO's Patent Center (online).
- **Fees:** \$320–\$1,100 (filing + search/examination).

## Step 3: Examination

- **First Office Action:** Within 16 months.
- **Responding:** Amend claims or argue against rejections (e.g., distinguish from prior art).

## Step 4: Grant & Maintenance

- **Issue Fee:** ~\$1,000.
- **Maintenance:** Fees at 3.5, 7.5, and 11.5 years (\$2,000–\$4,500 total).

## Key Considerations for Bangladeshis:

- **Legal Representation:** Mandatory for non-U.S. residents (hire a USPTO-registered attorney).
- **Software Patents:** Allowed if tied to "a machine or transformation" (*Alice Corp. v. CLS Bank*).

## III. European Patent Process for Bangladeshis

*Governing Law:* European Patent Convention (EPC).

### Step 1: File with EPO (European Patent Office)

- **Language:** English, French, or German (translations required if filed in Bengali).
- **Fees:**
  - **Filing:** €125.
  - **Search/Examination:** €1,500–€2,500.

### Step 2: Substantive Examination

- **European Search Report (ESR):** Published within 6 months.
- **Respond to Objections:** Address lack of inventive step (Art. 56 EPC).

### Step 3: Validation in EU States

- **Post-Grant Requirements:**
  - **Translations:** Required in some countries (e.g., France, Germany).
  - **Fees:** €200–€500 per country.
- **Unitary Patent Option:** Single validation for 24 EU states (post-2026).

## Key Considerations for Bangladeshis:

- **Technical Character:** Software must solve a technical problem (e.g., optimize device performance).

- **Agent Requirement:** Non-EU applicants must appoint a European patent attorney.

## Comparative Overview

Aspect	Bangladesh	United States	European Union
Cost	৳50,000–৳200,000	\$5,000–\$15,000+	€30,000–€50,000+
Software Patents	Allowed if hardware-linked	Broadly permitted	Requires "technical effect"
Examination Time	24–36 months	18–24 months	24–36 months
Legal Representation	Required for foreigners	Mandatory for non-residents	Mandatory for non-EU residents

## Strategic Recommendations for Bangladeshi Innovators

1. **Priority Claiming:** File in Bangladesh first, then use the 12-month Paris Convention window for U.S./EU applications.
2. **Provisional Patents:** Use U.S. provisional applications to buy time for R&D.
3. **Defensive Publishing:** Publish technical details to block competitors if patents are unaffordable.
4. **Leverage TRIPS Flexibilities:** Use compulsory licensing provisions under Bangladesh's 2022 Act for public health needs