

Apurva Bahadur

Phones: +91-99606-20908, +91 75074-37503
Email: apurva@writxt.com
www.linkedin.com/in/apurva-bahadur-aa896b3/

Technical Writer and Technical Illustrator for Engineering, IT, and other domains

- **16 years'** industry experience as a technical writer.
- **29 years'** overall work experience in the engineering domain.
- **9 years'** experience in design and implementation of control engineering.
- Has a wide engineering knowledge base.
- Delivers complete solutions, with inputs from briefings to offering dispatch-ready documentation.
- Controls the entire document process, including collection of data, interviews, research, layout, processing of images, creation of engineering drawings, graphs, flowcharts, and illustrations.
- Engages remote audience with online interactive e-learning and rapid authoring modules.
- Generates engineering drawings for technical documentation and illustrated spare part catalogues from 3D CAD models. These views include isometric, sectional, exploded, ghosted, annotated, and more.
- Creates online engineering e-learning content with text, images, voice-overs, animation, videos, and evaluation tests.
- Does cost-effective technical animation of engineering objects.
- Offers high quality rendering of engineering objects using virtual photo-shoots.
- Writes technical and technology related content for articles, blogs, and websites.
- Editing video with transitions, titles, assimilation of content to retain interest, and uploading and maintenance of the output to a YouTube channel.



Highlights

- Creates technical documents, user manuals, installation manuals, illustrated spare part catalogues, e-learning or rapid authoring modules, white papers, presentations, blogs, websites, and training material.
- Skills in diverse software tools to deliver the complete project, cover to cover.
- Understands complex technical content to deliver lucid, ready-to-use documentation.
- Delivers print or web based documentation.
- Authors in XML/DITA.
- Creates technical illustrations and animations from 3D engineering CAD models.
- Does technical animation to show engineering operations. Can embed the low-bandwidth consuming animation into online documentation.

- Delivers on engaging online e-learning content for training and sales.

Experience

Consulting Technical Writer – Magnaproduce Technologies, Pune

September 2018 – Ongoing

Magnaproduce Technologies is an engineering firm offering the following services:

- Engineering and product design
- Component sourcing
- Third-party inspection
- Technical documentation

At Magnaproduce, I head the **Technical Documentation** vertical.

Technical Documentation

I am working or have finished delivery of the following ongoing technical documentation projects:

- Pictorial workshop manual of new generation diesel engines with 3D CAD model derived engineering views.
- Operational and maintenance manual of gas powered engines.
- An online multi-lingual e-learning portal for training and servicing of diesel engines.
 - Consists of engaging text, spoken natural sounding voice, animation, logical branching, online tests, and retention of test results.
 - Modules for technical training, servicing procedures, online tests etc.
 - Text and voice content in Spanish, Portuguese, and Arabic
 - Integration with an online learning management system.
- Technical documentation for automation components.
 - Manual for building automation units.
 - Assembly guides.
 - Marketing communication of technical content.
- Operational and Maintenance (O&M) manuals for export range of India's leading brand of diesel generating sets.
 - These manuals cover 5 prime movers families and a wide power range from 15 kVA to 1010 kVA.
 - The illustrated manuals have modular construction and use automation features of the editing software.
 - I write the manuals based on engineering models and technical briefings by subject matter experts.
 - Reference material of bought-out collaterals forms a section of the manuals. For creating this reference sections, I use a variety of tools for efficient extraction of text, tables, and images from existing PDFs.
 - The final size of the manuals is around 2000 pages.
 - The delivery format is PDF and responsive HTML5.
 - Once finished, these manuals will translated into Spanish, Portuguese, and Arabic.
- Operational and Maintenance (O&M) manual of 500 kVA underslung diesel generator set for railway application.
- Bilingual (English and Hindi) technical manuals, user handbook and spare part catalogues for defense applications.
- Installation manual of interfacing Electronic Control Unit (ECU) with CRDI diesel engines.
- Illustrated spare-part catalogue for a family of diesel engines in print and online versions.

May 2016 – September 2018

John Bean Technologies India Pvt. Ltd. is a part of JBT Corporation, a global leader in food processing equipment, <https://www.jbtc.com/foodtech>. At JBT, I handled dual responsibilities of **Technical Documentation** and **Control Engineering**.

Technical Documentation

- I was in charge of **Technical Documentation** for John Bean Technologies India Pvt. Ltd.
- I set-up the in-house technical documentation department for JBT in India, which was previously outsourced. My efforts resulted in standardization of documentation and quick delivery of manuals for a diverse range of equipment with a uniform look and feel.
- My deliverables included **user manuals** and **installation guides** of sophisticated food processing equipment in print and PDF format. I have authored 100 + technically complex and adequately illustrated technical documents for the customer and service team.
- For these manuals, I have used only the default tools available on the computer, like Word, Paint, and Snipping Tool. These manuals have the following attributes:
 - Leverage the automation in Word for quickly creating consistent looking technical documentation across the product lines.
 - Reuse of common elements and linked images for reduction in file size, standardization, and consistent delivery of the final product.
 - Hyperlinked table of content and cross-references.
 - Based on Microsoft Style for Technical Publications.

Control Engineering

All equipment of John Bean Technologies have an associated electrical control panel of varied sophistication with electronic drives, programmable logic controllers (PLCs), and human machine interfaces (HMIs). Each control panel powers between 1 to 10 equipment, from the same user interface.

- During my tenure at John Bean Technologies, I additionally held charge of **Control Engineering**.
- My control engineering tasks included:
 - Defining the scope and specifications of the control panels required for driving varied equipment.
 - Generation of electrical specifications from equipment requirement documents and review meetings.
 - Scoping the specifications, based on logic and power requirement for the selected equipment of the food processing line.
 - Ensuring high-hygiene design of controls for food equipment application.
 - Outlining the practical design and requirement of the control panel and sharing the specifications with the control panel builder/supplier.
 - Coordinating with the control panel builder/supplier to detail the panel design.
 - Approving the final design and bill of material after a detailed audit of components, layout, placement and ergonomics.
 - Designing of control panel decals and markings.
 - Designing the HMI screens and user interface from the engineering drawings.
 - Specifying the PLC specifications and logical requirements.
 - Authoring of online help for embedding in the HMI.
 - Setting of drives, display units and safety interlocks.
 - Auditing of existing designs to optimize material and costs.
 - Locating new vendors and technologies to localize the manufacture of panel, design and implement cost savings.
 - Detailed testing of finished control panels.
 - Calculating power requirement for electrical loads.
 - Supporting the service team during installation.

- Selecting and specifying sensors and their application.
- Specifying and maintaining the electrical bill of material for a project.
- Modularizing and standardizing of control panels and solutions.
- Optimizing the layout and ergonomics to reduce size, lower costs, and improve esthetics.
- Specification, design, testing, and commissioning of shop-floor testing and power distribution panels.
- During my tenure with JBT, I have designed the specifications and detailing for approximately 80 control panels.

Technical Writer - Siemens Technology and Services Private Limited, Pune

November 2014 – May 2016

Siemens Technology and Services Private Limited (STS), Pune provides software solutions for various Siemens products of building technologies, building automation, fire safety, and mobility applications. At STS, I worked as a **Technical Writer**, employed on the payroll of Adecco India Private Limited.

My work at STS:

- Writing technical documents for diverse domains such as building automation, fire safety, and programming support tools.
- Authoring and editing of user manuals, online help, installation guides, release notes, and white papers.
- Maintaining large number of documents to the latest revision, with inputs from various subject matter experts.
- Working with various teams for a variety of domains and projects. This necessitates quick learning of the concepts and a rapid familiarity with the application.
- Writing of API (application program interface) documentation for code and utilities.
- Working in an agile scrum environment for some projects where the technical communication was done parallel to software development and testing.
- Reporting licensing compliance through OSS (open source software) clearing.
- Training of fellow team members on aspects of technical communications.
- Authoring articles in the periodic newsletter.
- Participating in the organizing committee for various corporate social service initiatives.
- Contributing in-house software discussion club and photography group.

Consultant Technical Writer, Pune

October 2006 – April 2016

For this period, I consulted as a technical writer for a variety of clients:

Deliverables:

- Technical manuals, help systems, API documentation, technical illustrations, animations and walk-throughs, IETMs (interactive electronic technical manuals), E-learning projects, story boards, technical and technology articles, white papers, case studies, application notes, website copy, brochure copy, and advertising contents.

Clients:

- Messung Systems, Tata Communications, Thermax, Kirloskar Oil Engines, Greaves Cotton, Mahindra and Mahindra, MIL India, PRAJ Industries, Centre for Development of Advanced Computing (CDAC), Accurate Sales and Services, Electronica, DaVinci Engineering, EcoAxis Systems, Neubauplan Machine Design Studio, Ibruk Consulting, Quantum Info Trainers and Consultants, Magnaproduce Automation, VSmart Thermotech, and several small/medium enterprises.

Manager, Engineering - RB Electronics, Pune

April 1989 – September 2006

RB Electronics is a manufacturer of electronic, sensors, and electro-mechanical assemblies for the diesel engine industry.

My work at RB Electronics:

- I conceived and designed several electronic products. These products are manufactured in large numbers, and are working successfully in arduous conditions, all round the world.
- My responsibilities included design, manufacture, testing, quality control, application, installation, training, and customer interaction.
- I was involved in design, manufacture, testing, and commissioning of diesel genset control panels, ranging from 1 kVA to 2.2 MVA.
- A brief list of products conceived and designed by me:
 - Tachometers, hour meter and gauge units.
 - Engine safety units for diesel genset application.
 - Genset automation and instrumentation products.
 - Electronic panels for railway locomotives.
 - Engine safety modules for dumper trucks.
 - Annunciators and fire alarms using serial protocol.
 - Textile machine and printing-press controls.
 - Electrical panels for engine control and AMF functions.
 - Electronics products for defense, designed to work in harsh environmental conditions.

Engineer – Messung Systems, Pune

1987 – 1988

Messung Systems is a pioneer of PLC systems in India.

1987-1988 Messung Systems, Pune: Product Development

My work at Messung Systems:

- Engineer in the Research and Development department.
- Developed AC output card for a PLC.
- Detailed testing and evaluation of AC output devices for short circuit tolerance.

Professional Skills

Software Proficiency

- oXygen XML, Schema ST4 XML and CMS, Solidworks Composer, Keyshot, Framemaker, Robohelp, Indesign, Autocad, Articulate, Help+Manual, Illustrator, Coreldraw, Corel Designer, Word, Powerpoint, Photoshop, Acrobat, Camtasia, Snagit, FineReader, and TextAloud.
- Knowledge of technical writing style guides such as Microsoft Style for Technical Publications and Siemens Global Style Guide.
- Familiarity with management tools like IBM Rational ClearCase Configuration Management System, IBM Rational ClearQuest Workflow Automation Tool, HP QualityCenter Quality Management Software, and Siemens Sharepoint.
- Familiarity with Solidworks and the 3D CAD design process.

Technical Domains

I comprehend engineering of the following domains: Computer hardware, software, networking, automation, instrumentation, telecom, electrical, electronics, automobile electronics, mechanical,

machine tools, packaging machines, material handling systems, food processing, automotive, process engineering, power generation, railways, aviation, defense, and more.

Technical Versatility

- Conversion of a variety of legacy documents to XML based projects for single sourcing and multi-channel publishing.
- Creation of technical illustrations, cutaway view, ghosted views, peeled layer views, exploded views, active bill of materials and annotations, animations, walk-throughs, fly-throughs, interactive visual training material and more, from 3D CAD data.
- Creation of technical animation showing procedures and views of engineering objects. Can embed the low-bandwidth consuming animation into online documentation. Sample of online manual with embedded videos: <https://www.writxt.com/SBS/>
- Creation of flow diagrams, illustrations and photography for the technical documents.
- Creation of completely new and updated manuals from older printed and PDF material.
- Creation of high quality rendering of engineering items to deliver virtual photo-shoots.
- Authoring and translation of technical manuals in Hindi and Marathi.

Some of my unusual projects

- Extraction of data from a read-only electronics catalogue to create new part lists using OCR (optical character recognition) techniques and unlocking 'read only' PDFs.
- Conversion of A4 sized low-resolution maps (from Pune Municipal Council website) to A0 sized vector maps with multiple layers and multiple languages options for other applications.
- Extraction of scanned maps and drawings to vector files using trace and redraw techniques.
- Authoring of a user manual in Marathi, for jetting machines.
- Translating diesel genset manuals from English to Hindi.
- Conversion of Excel based tables into a 1200 page multi-chapter book with illustrations, cross-referencing, table of contents and word index using Adobe Indesign.

Education

- Certificate course in oXygen XML/DITA.
- Certificate course in Solidworks Composer.
- Certificate course in XML/DITA based authoring.
- Certificate course in Framemaker.
- Certificate course in Indesign Quickstart.
- Certificate course in Learning Solidworks Composer.
- Certificate course in basic and advanced Articulate.
- BA, Psychology with first class, from Pune University April 1984.

I was pursuing a Diploma in Industrial Electronics but did not complete the course.

Personal details

- Gender: Male.
- Date of Birth: 30th September 1962.
- Marital Status: Married, 1 child.
- Residential Address: 2, Vrindavan Kunj, 759/126B, Prabhat Road, Pune – 411004, MH, India.
- Mobile Phones: +91-99606-20908, +91-75074-37503.
- WhatsApp Number: +91-99606-20908
- Emails: apurva@writxt.com, apuwdm2@gmail.com.
- Linguistic Abilities: Fluent in English, Hindi and Marathi – read, write and speak.
- Social Commitment: A regular blood donor.

Interests

- Travelling, photography and world music.
 - I am a committed Indian Railway enthusiast and photographer. Gallery of my 4500+ Indian Railway images: [https://www.facebook.com/apurva.bahadur/photos_all]
 - My railway images feature in:
 - On the cover of Dorling Kinderleys' coffee table book, Indian Railways – a visual journey [<https://www.amazon.in/Indian-Railways-Visual-Journey-Transforming/dp/9388372069>]
 - Indian Railways' recent coffee table book, 'More Miles, More Smiles.' [[https://irp-cdn.multiscreensite.com/b86a7c6e/files/uploaded/Indian Railway CTB Final.pdf](https://irp-cdn.multiscreensite.com/b86a7c6e/files/uploaded/Indian%20Railway%20CTB%20Final.pdf)]
 - An online solo exhibition of my railway images 'From Apu to Apurva: Romancing the Rail, hosted by National Institute of Design, Ahmedabad, October 2020. [<https://www.nid.edu/news/alpaviramaexhibition.html>]
 - An exhibition at the Gyaan Adab Centre, Pune, December 2015. [<http://www.gyaanadab.org/journeys-festival/art-photography/>]
 - On the cover of several 'Indian Railways' magazine issues, including their annual issues for 2014 and 2015. [<https://indianrailways.gov.in/HindiMagazine/IRSeptember2019.pdf>]
 - Guest speaker at Rotary Club meet on Railway Photography, July 2018.
 - Guest speaker at The Photographic Society of India on Railway Photography, Mumbai, August 2019.
 - Guest speaker about Indian Railway on various online forums from September 2020:
 - Model Railway Society of Pune
 - Center for Railroad Photography & Art, USA [<https://railphoto-art.org/virtual-conversations-fall-2020/>] [<https://www.youtube.com/watch?v=4omRTk9EQw8>]
 - Indian Railway Fan Club Association (IRFCA) [<https://www.youtube.com/watch?v=tvuscVnrZdM>]
 - Railway Enthusiasts Society (RES)
 - Wisconsin Chapter of the National Railway Historical Society, USA
 - Khaki Labs, Mumbai
 - Gyaan Adab, Pune: [https://www.youtube.com/watch?v=_svKJ2ATCCA], [<https://www.youtube.com/watch?v=ghQdpNGjFx8&list=PLJ44NH1-2q4t9MoCQH1ZidH3ztSw00XiQ&index=10>]
 - Damle Safaris: [<https://www.youtube.com/watch?v=jNRN14gZ9JY>]
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