

Wireless Design Services

Business Model

Development Methodology

PHYBIT

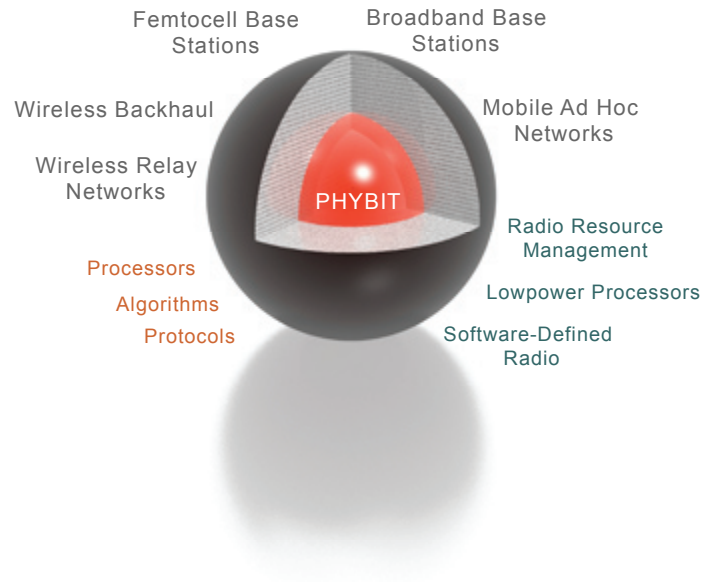
Welcome

Phybit provides advanced design services for a variety of wireless communications systems. Our work ranges from algorithms and protocols all the way to the development of production-quality systems on silicon.

Phybit core technology accelerates the development of wireless network equipment while meeting tight budget and schedule constraints. All our solutions are custom-made to match the specific and proprietary needs of clients.

Contents

Welcome	2
Phybit Wireless Design Services	4
Silicon Platforms for Wireless Systems	4
Solution Development Methodology	5



Standard and Proprietary Systems

Phybit wireless design services are suitable for cost-effective implementation of complex functions in both standard as well as proprietary systems.

System

Macrocell or Picocell Broadband Base Stations
 Femtocell and Home Base Stations
 Wireless Relay Stations
 Wireless Backhaul Equipment
 Wireless LAN Access Points
 Mobile Ad Hoc Networks

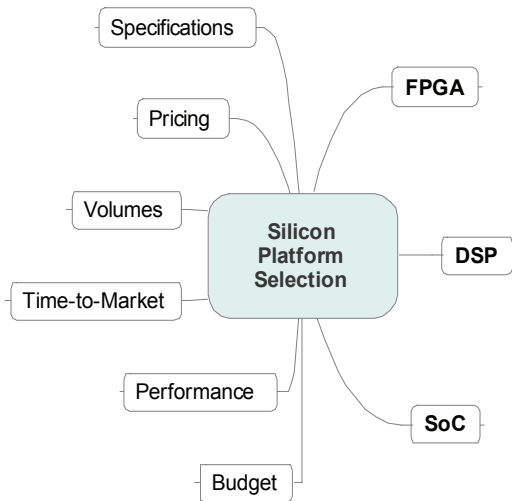
Standard

HSPA, LTE, WiMAX
 HSPA, LTE, WiMAX
 802.16j
 Proprietary, 802.16
 802.11n, VHT
 Proprietary, 802.11s

How We Work with Clients

Phybit Wireless Design Services

At Phybit, our development approach is the result of decades of experience in putting our skills to work to the full benefit of our exacting clients. We carry out every assignment in step-by-step ways and we believe that even the most complex problems have cost-effective solutions once they are broken down into smaller, simpler components.



From Algorithms to Silicon

Silicon Platforms for Wireless Systems

Economic considerations and competitive forces drive the development of wireless network equipment. Volumes make all the difference to how a solution is implemented in silicon and how it is deployed within and end-to-end system.

At Phybit, we consider all possible options in order to deliver the right solution to clients in timely and cost-effective ways. Depending on volume requirements, one or more of the options listed below.

Production Goals

Low Volumes

Mid Volumes

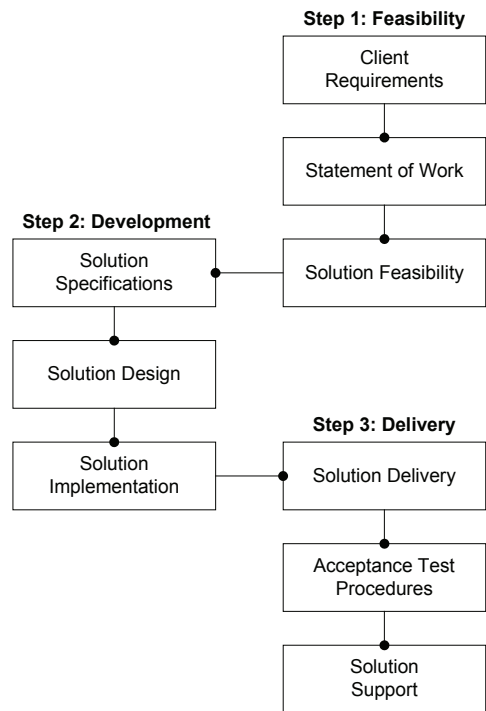
High Volumes

Silicon Platform

Field Programmable Gate Arrays (FPGA)

DSP, Programmable Processors, Structured ASIC

System-on Chip (SoC)



THREE STEPS TO SUCCESS

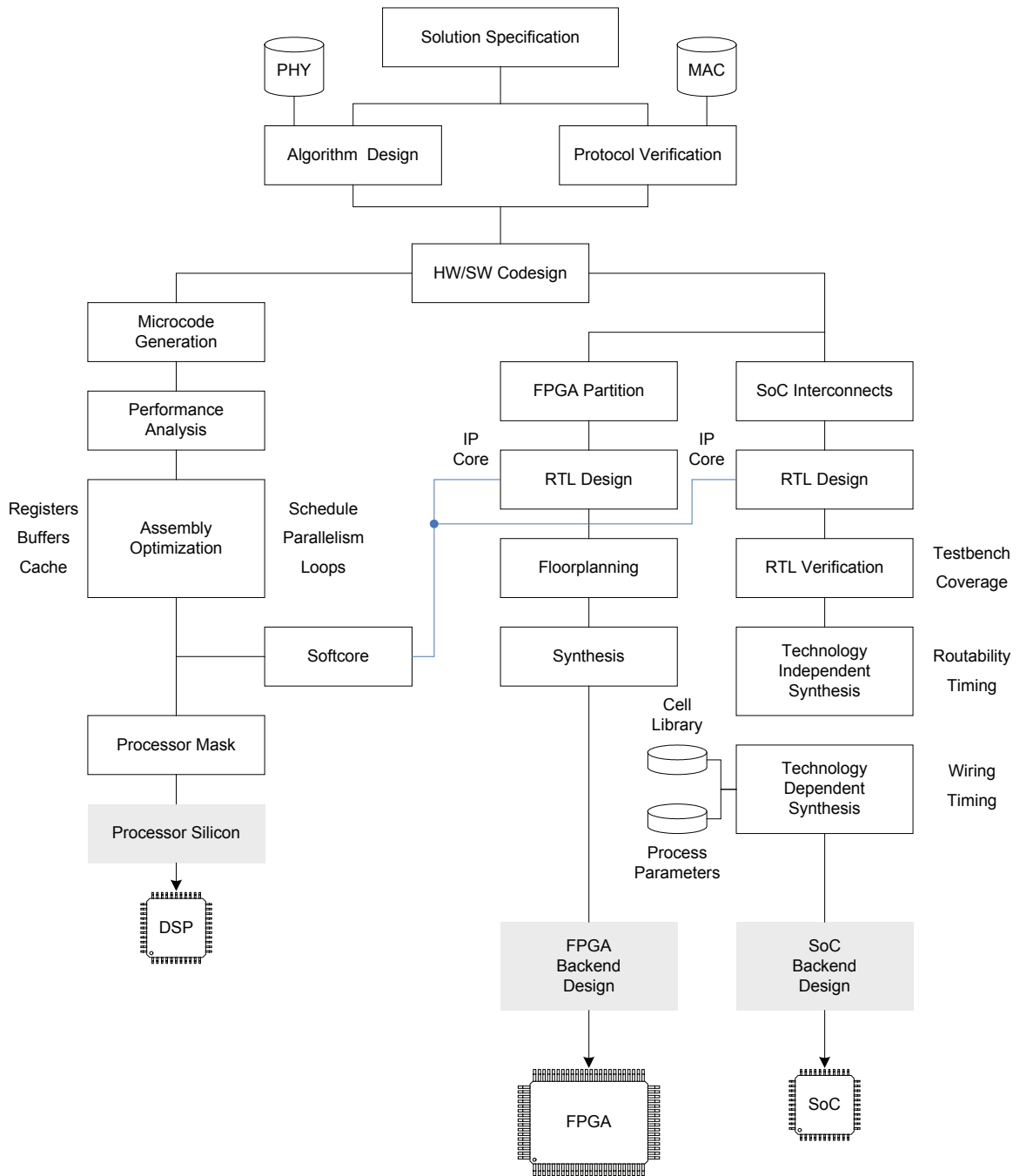
Phybit projects are carried out in three methodical steps in order to manage risks and provide clear-cut intermediate deliverables.

We begin by transforming client wish-list into a detailed statement of the work. The problems we face range from design of fast algorithm all the way up to the development of complex, multi-function systems on silicon. We then outline a solution that makes sense to both clients and to ourselves before we proceed to formulate the specification of what the solution does, not how it does it. The how comes in a solution design step which describes in complete detail how the solution is to be implemented in silicon. This is followed by delivering the solution to our clients through a series of comprehensive acceptance test procedures with maximal coverage for quality assurance. After client acceptance, we proceed to support the solution as need may arise.

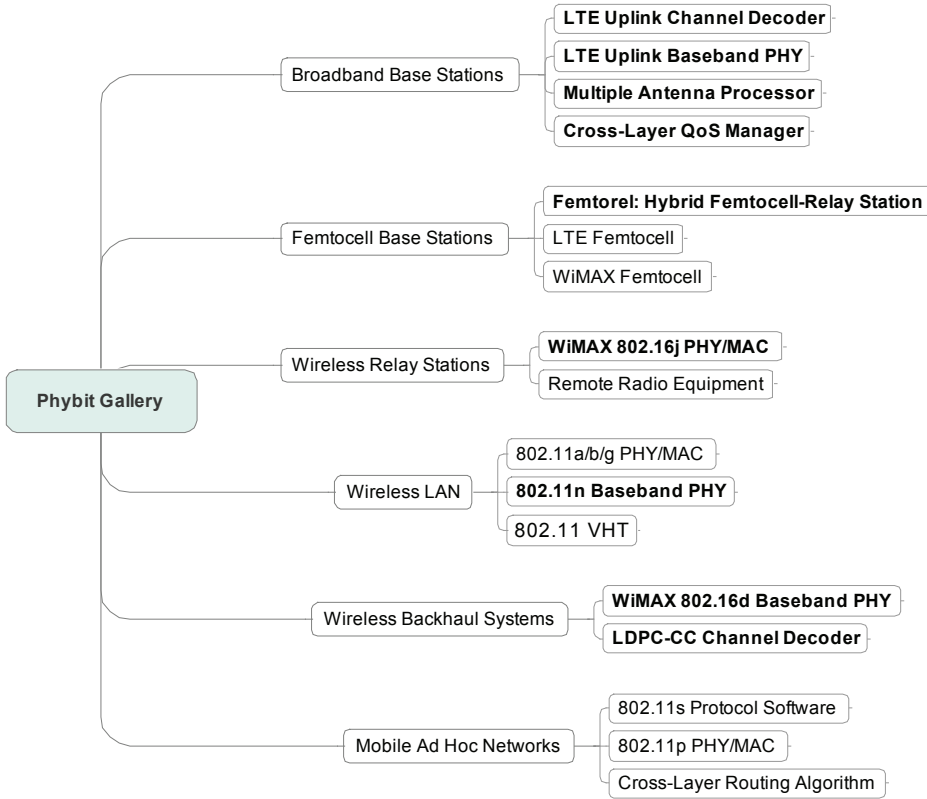
Focus on Frontend Design Services

Solution Development Methodology

Phybit focuses on the frontend of device development and we specialize in translating solution specifications into netlists for production-quality integrated circuits. As our projects always have both software programmable and hardwired components, we have developed an effective methodology for integrating softcores into both FPGA and SoC designs.



Phybit works with a select number of partners for backend FPGA and SoC services.



Examples of Phybit Designs

To illustrate the scope of our projects, we can provide a portfolio of designs for wireless applications as listed below. Further details are available upon request.

System	Phybit Design
Broadband Base Stations	LTE Uplink Channel Decoder LTE Uplink Receiver Multiple Antenna Processor Cross-Layer QoS Manager
Femtocell Base Stations	Hybrid Femtocell-Relay (Femto-rel) Station
Wireless Relay Stations	802.16j MAC/PHY
Wireless Backhaul System	802.16d PHY LDPC-CC Decoder
Wireless LAN Access Points	802.11n MiMo Receiver

The Wireless World

Phybit Design Services

SYSTEMS

Broadband Base Stations
Femtocell Base Stations
Wireless Relay Systems
Wireless Backhaul
Wireless LAN
Mobile Ad Hoc Networks

SERVICES

Algorithm Design
Protocol Implementation
Embedded Software Development
FPGA Implementation
System-on-Chip Development

FEATURES

Re-usable PHY Algorithm Library
Re-usable Protocol Software
Proven, Pre-Made Designs

BENEFITS

Faster Time-to-Market
Lower Development Cost
Higher Performance
Lower Production Cost
Lower Maintenance Cost



PHYBIT

Wireless Design Services

PHYBIT, INC.

10-10 Cendex Center, 120 Lower Delta Road, Singapore 169208.

T. [+65] 6276 2945 F. [+65] 6276 2965

株式会社 PHYBIT

〒141-0022 東京都品川区 東五反田2-3-3 東五反田AMビル5F

T. [+81] 03 5789 7070 F. [+81] 03 5789 7071

Email: info@phybit.com Web: www.phybit.com