فهرست مطالب

 [مقدمه 4](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764247) [انگیزه برای شبکه‌های شخصی 4](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764248)

 [به هم متصل بودن باعث کاهش افزونگی 5](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764250)

 [محاسبات حاضر در همه جا در مقابل I/O توزیع شده 5](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764251)

 [متصل شدن به دنیای خارج 6](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764252)

 [وسایل شبکه‌های شخصی 6](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764253)

 [استاندارد های wireless: 7](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764254)

 [بلوتوث 8](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764255)

 [ارتباط چگونه برقرار می‌شود؟ 8](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764256)

 [معماری 9](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764257)

 [پروتکل بلوتوث[2][18] 10](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764258)

 [مزایا 12](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764259)

 [محدودیت در انتقال داده(Data) از طریق سیم 12](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764260)

 [قیمت ارزان فناوری بلوتوث 12](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764261)

 [سرعت انتقال اطلاعات در بلوتوث 12](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764262)

 [اتوماتیک بودن 12](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764265)

 [کم مصرف بودن 13](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764266)

 [کاربرد 13](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764267)

 [مثال‌هایی از کاربرد 14](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764268)

 [امنیت 14](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764269)

 [آینده بلوتوث 15](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764273)

 [معرفی Zigbee 16](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764274)

 [ویژگی‌های زیگ بی 16](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764275)

 [تکنولوژی ZigBee 16](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764276)

 [علامت تجاری 17](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764277)

 [زمینه های کاربرد معمولی [3] 18](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764278)

 [پروتکل 19](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764279)

 [لایه شبکه 20](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764280)

 [لایه کاربردی 20](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764281)

 [استانداردهای شبکه‌ای 20](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764282)

[نتیجه‌گیری 21](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764283)

[منابع. 22](file:///F%3A%5CdriveF%5COthers%5Ckarshenasi%5Cshabake%5Cshabake%5C%D8%B3%D9%85%DB%8C%D9%86%D8%A7%D8%B1%5C%D8%B4%D8%A8%DA%A9%D9%87%20%20.doc#_Toc345764284)